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On-Site Wastewater Treatment Systems (OWTS)



Local Area Management Plan (LAMP)

***Nevada County Land Use & Development Code
LOCAL AREA MANAGEMENT PLAN (LAMP)
AND
INDIVIDUAL ON-SITE SEWAGE DISPOSAL
REGULATIONS***

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NEVADA COUNTY LAMP CHECKLIST

E. Rapport, Revised 10 Feb 2015

Nevada County LAMP, NorthStar Engineering, March 16, 2016
 PROPOSED LOCAL CODES IN COMPLIANCE WITH OWTS POLICY

GENERAL REQUIREMENTS FOR LAMPs						
OWTS Policy Section	OWTS Policy Section Summary	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	Relevant LAMP Section	Legal Authority/ Code Section	Deficiency; Address Prior to Our Scheduling for Board Approval.	Potential Concern; Address in First Water Quality Assessment Report.
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.	Intro R&Rs	Board of Supervisors May Adopt Sewage Disposal Regulations Sec. L-VI 1.1 Purpose Defining Sewage Disposal Regulations Sec. L-VI 1.2 Definitions Q		
3.3.1	Complaints	Include numbers and locations of complaints, related investigations, and means of resolution.	Intro R&Rs	Sec. L-VI 1.1 Purpose		
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.	Intro R&Rs	Sec. L-VI 1.1 Purpose		
3.3.3	Permits for New and Replacement OWTS	Include numbers and locations of permits for new and replacement OWTS, and their Tiers.	Intro R&Rs	Sec. L-VI 1.1 Purpose		
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.	Intro R&Rs	Sec. L-VI 1.1 Purpose		
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.	Intro R&Rs	Sec. L-VI 1.1 Purpose		

9.0	Minimum OWTS Standards	This Section is an introduction; we require no specific LAMP Section citation here.		Not applicable		
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.	Intro R&Rs	Sec. L-VI 1.1 Purpose	Need Clarify text with Amy and Eric.	
9.1.1	Degree of vulnerability due to local hydrogeology	<i>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).</i>	Definitions Administrative Section A-014 , A-44 Technical Sections T-052 through T-090	Sec. L-VI 1.1 Purpose Sec. L-VI 1.21 Violations, Nuisances and Abatement		
9.1.2	High quality waters and other environmental 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. <i>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.</i>	Administrative Section A-014 , A-44 Technical Sections T-052 through T-090	Sec. L-VI 1.1 Purpose		
9.1.3	Shallow soils requiring non-standard dispersal systems	<i>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.</i>	Definitions Administrative Section A-014 , A-44 Technical Sections T-052 through T-090	Sec. L-VI 1.1 Purpose		
9.1.4	High domestic well usage areas	<i>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</i>	Administrative Section A-014 , A-44 Technical Sections T-052 through T-090	Sec. L-VI 1.1 Purpose		

		<i>mitigate the potential for false positives.</i>				
9.1.5	Fractured bedrock	<i>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.</i>	Definitions Administrative Section A-014 , A-44 Technical Sections T-052 through T-090	Sec. L-VI 1.1 Purpose		
9.1.6	Poorly drained soils	<i>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.</i>	Definitions Administrative Section A-014 , A-44 Technical Sections T-052 through T-090	Sec. L-VI 1.1 Purpose		
9.1.7	Vulnerable surface water	<i>Our key potential concern is eutrophication of fresh surface water. While typically with relatively low mobility in groundwater and recently informally banned in dishwasher 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.</i>	Definitions Administrative Section A-014 , A-44 Technical Sections T-052 through T-090	Sec. L-VI 1.1 Purpose		
9.1.8	Impaired water bodies	<i>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.</i>	N/A Defaulting to Minimum Standards in Tier 3 of the OWTS Policy	Sec. L-VI 1.1 Purpose		
9.1.9	High OWTS density areas	<i>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.</i>	N/A Nitrogen Not Identified and a chronic Issue	Sec. L-VI 1.1 Purpose		
9.1.10	Limits to parcel size	At minimum, consider hydraulic mounding, nitrate and pathogen loading, and sufficiency of potential replacement areas.	A-014 A-036	Sec. L-VI 1.1 Purpose		
9.1.11	areas with OWTS that predate adopted	This refers to areas with known, multiple existing OWTS.	Definitions Administrative Section A-014 , A-44	Sec. L-VI 1.1 Purpose		

	standards		Technical Sections T-052 through T-090			
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.	Definitions , Administrative Section A-014 , A-44 Technical Sections T-052 through T-090	Sec. L-VI 1.1 Purpose		
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.	Flow A-008 , Flow T-052 Technical Sections T-052 through T-090	Sec. L-VI 1.1 Purpose		
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.	A-012 , A-016 , A-024	Sec. L-VI 1.11 Sewage Disposal System Construction Permit Application		
9.2.2	Special Provision Areas and Requirements near Impaired Water Bodies	<i>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.</i>	A-042 A-044	Sec. L-VI 1.1 Purpose		
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.	A-030	Sec. L-VI 1.16 Variances		
9.2.4	Qualifications for Persons who Work on OWTS	Qualifications generally cover requirements for education, training, and licensing. <i>We suggest that Local Agencies review information available from the California Onsite Water Association (COWA), see: http://www.cowa.org/</i>	Definition: Consultant A-010 T-088	Sec. L-VI 1.14 System Monitoring and Maintenance Sec. L-VI 1.8 Site Evaluation Required		

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; <i>see also Tier 4</i> . Also, provide information to appropriate volunteer groups. <i>At minimum, we suggesting providing this information on your webpage.</i>	T-054	Sec. L-VI 1.1 Purpose		
9.2.6	Septage Disposal	Assess existing and proposed disposal locations, and their adequacy.	Additional LAMP Components	Sec. L-VI 1.1 Purpose		
9.2.7	Maintenance Districts and Zones	<i>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.</i>	A-038 Intro	Sec. L-VI 1.20 Centralized Sewage Disposal Criteria ARTICLE 3		
9.2.8	Regional Salt and Nutrient Management Plans	Consider development and implementation of, or coordination with, Regional Salt and Nutrient Management Plans; <i>see also State Board Resolution 2009-0011</i> : http://www.waterboards.ca.gov/centralvalley/water_issues/salinity/laws_reqs_policies/rw_policy_implementation_mem.pdf	Intro	Sec. L-VI 1.1 Purpose		
9.2.9	Watershed Management Groups	Coordinate <i>with volunteer well monitoring programs</i> and similar watershed management groups.	Intro	Sec. L-VI 1.1 Purpose		
9.2.10	Proximity of Collection Systems to New or Replacement OWTS	Evaluate proximity of sewer systems to new and replacement OWTS. <i>See also Section 9.4.9.</i>	A-018	Sec. L-VI 1.1 Purpose		
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.	Intro R&Rs	Sec. L-VI 1.1 Purpose		
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; <i>however we will need rationale in detail.</i>	T-112 Additional Info page 14	Sec. L-VI 1.4 Sewage Disposal A Sec. L-VI 1.1 Purpose		

9.2.13	Cesspool Discontinuance and Phase-Out	Provide plans and schedule.	Definitions A-008	Sec. L-VI 1.1 Purpose		
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:	Intro R&Rs	Sec. L-VI 1.1 Purpose		
9.3.1	Permit Records, OWTS with Variances	Describe your records maintenance; numbers, locations, and descriptions of permits where you have granted variances.	Introduction	Sec. L-VI 1.1 Purpose		
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. <i>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:</i>	Introduction Introduction	Sec. L-VI 1.1 Purpose		
		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/100+400_Wells_Spring-2013.pdf 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	<i>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</i>	Introduction	Sec. L-VI 1.1 Purpose		

LAMP CHECKLIST

		<i>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 $\delta^{18}\text{O}$ and $\delta^{15}\text{N}$ 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).</i>				
9.3.2.2	Domestic Well Sampling, Routine Real Estate Transfer Related	This applies only if those samples are routinely performed and reported.	N/A			
9.3.2.3	Water Quality of Public Water Systems	Reviews can be by you or another municipality.	N/A			
9.3.2.4	Domestic Well Sampling, New Well Development	This applies if those data are reported.	N/A			
9.3.2.5	Beach Water Quality Sampling, H&S Code §115885	<i>Public beaches include those on freshwater.</i>	N/A			
9.3.2.6	Receiving Water Sampling Related to NPDES Permits	This refers to existing data from other monitoring programs.	N/A			
9.3.2.7	Data contained in California Water Quality Assessment Database	This refers to existing data from other monitoring programs.	N/A			
9.3.2.8	Groundwater Sampling Related to Waste Discharge Requirements	This refers to existing data from other monitoring programs.	Introduction	Sec. L-VI 1.1 Purpose		
9.3.2.9	Groundwater Sampling Related to GAMA Program	This refers to existing data from other monitoring programs.	N/A			
9.3.3	Annual Status Reports Covering 9.3.1-9.3.2	Reports are due 1 February, annually beginning one year after 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.	Introduction	Sec. L-VI 1.1 Purpose		

9.4	Not Allowed or Authorized in LAMP:	For Section 9.4 et seq, ensure that your LAMP covers prohibitions.				
9.4.1	Cesspools	Local Agencies cannot authorize cesspools of any kind or size.	Definitions A-008	Sec. L-VI 1.1 Purpose		
9.4.2	Projected Flow > 10,000 gpd	<i>Apply professional judgment to further limit projected flows.</i>	Flow A-008 , Flow T-052 Technical Sections T-052 through T-090	Sec. L-VI 1.1 Purpose		
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.	Introduction	Sec. L-VI 1.4 Sewage Disposal B		
9.4.4	Installation on Slopes > 30% without Registered Professional's Report	<i>See also earlier comments, Section 9.1.1, regarding potential geotechnical concerns.</i>	T-066 T-066	Sec. L-VI 1.1 Purpose		
9.4.5	Decreased Leaching Area for IAPMO-Certified Dispersal System with Multiplier < 0.70	IAPMO, International Association of Plumbing and Mechanical Officials. <i>Decreased leaching area refers to alternatives to conventional (stone-and-pipe) dispersal systems; these alternatives require relatively less area. The multiplier, < 1, allows for a reduction in dispersal field area relative to a conventional system.</i>	T-054	Sec. L-VI 1.1 Purpose		
9.4.6	Supplemental Treatments without Monitoring and Inspection	<i>Therefore, ensure that the LAMP describes periodic inspection and monitoring for OWTS with supplemental treatments.</i>	T-052	Sec. L-VI 1.14 System Monitoring and Maintenance		
9.4.7	Significant Wastes from RV Holding Tanks	<i>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.</i>	A-008	Sec. L-VI 1.1 Purpose		
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. <i>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.</i>	T-052 T-056 T-058 T-060 T-062 T-064 T-066 T-068	Sec. L-VI 1.4 Sewage Disposal, B		

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.)	A-018	Sec. L-VI 1.7 Connection To Public Sewer System		
9.4.10	Minimum Setbacks:	These setbacks are from public water systems.	A-044	Sec. L-VI 1.1 Purpose		
9.4.10.1	From Public Supply Wells	If the dispersal system is less than 10' in depth, then the setback must be greater than 150' from public water supply well.	A-044	Sec. L-VI 1.1 Purpose		
9.4.10.2		If the dispersal system is greater than 10' in depth, then the setback must be greater than 200' from public water supply well.	A-044	Sec. L-VI 1.1 Purpose		
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'.	A-044	Sec. L-VI 1.1 Purpose		
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.	A-044	Sec. L-VI 1.1 Purpose		
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.	A-044	Sec. L-VI 1.1 Purpose		
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.	A-030	Sec. L-VI 1.1 Purpose		
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.	A-030	Sec. L-VI 1.16 Variances		

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.	T-052 through T-112 Additionally, Additional requirements for soils in Class E with percolation rates greater than 120 minutes per inch are not suitable for standard systems. Supplemental treatment for reduction of BOD and TSS are mitigations used in the County Successfully for sites with percolation rates greater than 120 min/in..	Sec. L-VI 1.1 Purpose		
9.6	Regional Water Quality Control Board Consideration of LAMP	Regional Boards shall consider past performance of local programs to protect water quality. <i>We will generally consider past performance based on our reviews of annual status and evaluation reports; see Section 9.3.3.</i>	N/A	N/A		

INTRODUCTION

These regulations establish requirements for sub-surface sewage disposal. These regulations do not permit effluent dispersal above the post installation ground surface. This includes, sprinklers, exposed drip lines, free-surface wetlands, ponds and the like. The Nevada County Department of Environmental Health (hereafter, "Department") is the agency responsible for the application of this Chapter. The California Regional Water Quality Control Boards (the Central Valley Region for the west slope of the Sierra Nevada and the Lahontan Region for the east slope of the Sierra Nevada) are the state agencies responsible for the protection of ground and surface water quality.

While the Department administers these regulations, the Regional Boards retain the authority to issue permits for any discharge of waste that may affect water quality, including discharges from individual systems. The Regional Boards adopt "Basin Plans" to define beneficial uses of water, adopt water quality objectives, and to provide guidelines to protect water quality.

The Water Quality Control Plan for the Lahontan Region (Lahontan Basin Plan) contains criteria for individual waste disposal systems. Some of the Lahontan Basin Plan criteria may be more stringent than those provided in this LAMP. However, after the LAMP is approved the County will allow the Department to authorize onsite waste treatment systems using the criteria in the approved LAMP

The Lahontan Basin Plan also contains discharge prohibitions which include discharges from OWTS in certain areas of the County. One such discharge prohibition is against discharges within the 100-year floodplain of the Truckee and Little Truckee Rivers. The Department will not issue permits for new individual onsite waste treatment systems in conflict with a discharge prohibition in the Lahontan Basin Plan, except as authorized by the Lahontan Water Board.

RESPONSIBILITIES AND DUTIES

The Administrative Section describes the Local Agency Requirements and Responsibilities. The following identifies how the Department will implement each section of the Policy.

The Department will implement this Local Area Management Plan (LAMP) in accordance with Tier 2 of the Policy once the LAMP is approved by the CVRWQCB.

The Department will adhere to the LAMP including all requirements for monitoring and reporting. Any modifications to the LAMP must first be submitted to the CVRWQCB with a written notice of the intended modifications. The modifications cannot be implemented until CVRWQCB approval has been given.

At the time of submittal of this LAMP there is one Clean Water Act section 303(d) impaired water body in Nevada County identified by the State Water Resources Control Board (Wolf Creek.) If additional 303(d) impaired water bodies are identified in the future, this LAMP will be revised to conform to requirements of “Tier 3 – Advanced Protection Management Programs for Impaired Areas”, as appropriate.

Annual Report

The annual report will be submitted to the CVRWQCB by February 1 of each year in a format prescribed by the Policy (3.3) and includes the following information:

1. Number and location of complaints.
2. Application and registrations of septic tank cleaners.
3. Number, location, description and risk tier of all OWTS permits.
4. Water Quality Monitoring identified in the Policy (9.3). Groundwater monitoring data will be submitted in a format for inclusion into Geotracker, and surface water monitoring shall be submitted to California Environmental Data Exchange Network (CEDEN).

Permanent Records- The Department will retain all permanent records and will make them available within ten (10) working days upon written request by the CVRWQCB. The Department will maintain the number, location and permit description of any variance granted.

Fifth Year Report – Every fifth year the Department will submit an evaluation of the monitoring program identified below in “Water Quality Data” and an assessment of whether water quality is being impacted by OWTS, identify any changes in the LAMP that will be under taken to address impacts from OWTS.

Notifications- Within 72 hours the Department will notify a public water system and the SWRCB, Division of Drinking Water that has a well located within 150 feet or surface water intake located within 1,200 feet of a failing OWTS. The Department will notify a public water system prior to the issuance of an installation permit or repair permit for a OWTS if the surface water intake is within 1,200 feet of the OWTS, is within the

drainage catchment of the intake point and is located such that it may impact water quality at the intake point; or within the horizontal setback from a public well.

The Department will maintain a contact list for each water system to make these notifications.

Water Quality Data - The Department will maintain a water quality assessment program that consists of obtaining water quality data from the following sources:

- Regulated small water systems in Nevada County, (SWS)
- Wells within Nevada County that are monitored as part of the Statewide Groundwater Ambient Monitoring and Assessment (GAMA) program,
- Nevada City WWTP
- Grass Valley WWTP
- Nevada County Department of Sanitation District 1 Small Cluster Systems

Regulated SWS are monitored at a frequency established by the California Department of Public Health (CDPH). Monitoring wells are sampled once per calendar quarter but not less than once every three years. Each well is sampled for nitrates and pathogens at a minimum. All information in the system is available for public review.

Water quality data associated with OWTS will be included in an annual report submitted to the CVRWQCB.

Corrective Actions – The Department has an established OWTS Enforcement Policy. This Policy can be found in Section A-040, and addresses all of the requirements of Tier 4 – OWTS Requiring Corrective Actions.

ORGANIZATION OF THESE REGULATIONS

The sewage disposal regulations are divided into two major parts. The first part is the Administrative, consisting of Sections A-002 through A-044**Error! Reference source not found.**, which explains general requirements for using the regulations and obtaining a permit. The second part is the Technical, consisting of Sections T-052 through T-116 that give the specific requirements for designing, installing and using a sewage disposal system. The Definitions of Terms used in the Administrative section of the regulations are located in Section T-114, and are important in understanding these regulations.

ADDITIONAL LAMP COMPONENTS

This Section of this LAMP addresses aspects of the Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems that are not addressed in the Administrative or Technical Sections of this LAMP. Note, that in addition to miscellaneous requirements discussed in the body of the Policy, each of the Policy elements described in “Tier 2– Local Agency OWTS Management Plan” but not addressed in the Administrative or Technical Sections of this LAMP is also

discussed below. Each program element is presented below in the order in which it appears in the Policy, i.e. the numbered sections below correspond to the numbered sections of the Policy.

9.2.3 Variance considerations are discussed in A-030 of this LAMP.

Variances are not allowed by this LAMP for the elements discussed in sections 9.4.1 through 9.4.9 of the Policy.

9.2.6 Adequate capacity for disposal of all septage pumped within Nevada County is assumed available at the Inviro-Tech receiving facility in Lincoln, CA. The volume of septage pumped each year in Nevada County is variable and cannot be projected with certainty.

9.2.7 Per Nevada County Code Title 3 Section VI Article 3 Sec. L-VI 3.12 requires District formation for Community Systems.

9.2.8 At this time Nevada County does not anticipate developing or implementing a Regional Salt and Nutrient Management Plan. Nevada County may consider collaborating with regional efforts in this regard if asked to participate in the future.

9.2.9 Regarding coordinating with watershed management groups, Nevada County representatives periodically attend meetings of the Regional Water Authority, the Sacramento Groundwater Authority, and the California Groundwater Association.

It is Nevada County's opinion that when considered together, current requirements for OWTS and well construction (as outlined in SCC 6.32 [liquid waste] and 6.28 [wells and pumps]) are adequate to protect groundwater. A vast majority of OWTS that do not meet 200 foot setback requirements to public wells are associated with Nevada County's Small Water System (SWS) program. SWS wells are required to be tested for nitrates, pathogens, and other chemical constituents on a schedule determined by California Title 22 regulations. To date SWS wells have not shown impacts by nitrate, nitrite, or pathogens that may be related to an OWTS.

For new OWTS on existing parcels that cannot meet public water supply well or surface water intake setbacks as outlined in Policy section 9.4.10, Nevada County will require supplemental treatment as described in Policy sections 10.9 and 10.10.

ADMINISTRATIVE SECTION

A-006: STATEMENT OF PURPOSE

Regulations Goals and Mission:

To restore and maintain the quality of public waters (see Definitions of Terms), and to protect the public health and general welfare of the people of Nevada County.

To provide technical guidance and standards for on-site wastewater treatment and disposal systems.

To facilitate the process of obtaining a sewage disposal permit, installing the sewage system successfully and maintaining it for its long term use.

A-008: GENERAL STANDARDS AND REQUIREMENTS

- (1) **Approved System.** An approved disposal system (sewage disposal or public sewer system) is needed for all structures that generate sewage. The following types of sewage disposal systems are approved under these regulations (see Definitions of Terms):
- (A) Standard system.
 - (B) Special Design systems.
 - (C) Other types of systems permitted in the Technical section, including vault privies, holding tanks, waterless toilets, portable toilet, and graywater systems.
 - (D) Pit privies may only be approved on a case-by-case basis in accordance with the variance process described in Section A-030, for primitive-type campgrounds where the Department has determined that a septic tank and leachfield are not practicable and vault privies would be inaccessible for service. Additional requirements are located in the Technical section.

Descriptions of these types of systems can be found in the Technical section of these regulations.

- (2) **Sewage Discharge.** A person may not discharge sewage onto the ground or into the groundwater or surface water. A system must treat and dispose of

sewage in a manner approved by these regulations.

- (3) **System Connection.** A person may connect any structure, or increase the flow to a system, only if that system is designed and approved to accommodate the flow. A septic system permit may be required as per Section A-024.
- (4) **System Requirements.** In order for a system permit to be approved and issued, the property must have a "department findings report" (A-014: On-SITE SOIL EVALUATION (OSSE) PROCESS) and be free of encumbrances (such as easements, deed restrictions, etc.) which would conflict with installing or operating the system. The design, construction, and operation of a new system must meet the requirements of the Technical section of these regulations.
- (5) **Public Sewer.** When a public sewer system is available (as described in Section A-018 (1) (E)), connection to the public sewer system is required, and a system permit will not be issued. In areas where public sewer systems may become available, planning for future connection to the sewer system is encouraged.
- (6) **Easements.** When any portion of a system will be put on a separate property, an easement or covenant protecting against conflicting uses must be recorded on that property. The Department will provide the form for this requirement.
- (7) **Replacement Area.** A minimum 100% replacement area (see Definitions of Terms), must be provided for any proposed system except for system repairs.
- (8) **Area Restrictions.** The system must be sited in a location that does not conflict with any other applicable county requirements, including, without limitation, those contained in the county General Plan or the county zoning regulations applicable to the property, and erosion control requirements of the Grading ordinance and related regulations. The soils testing and system site must also comply with any applicable restrictions and notes of the recorded map, for example, those designating no-disturbance zones or environmentally-sensitive resources (such as wetlands, landmark groves of hardwood trees or steep slopes) to be avoided.

Unless specifically permitted, a system must remain free from vehicle traffic, driveways, pavement, corrals, arenas, stables, structures, grading, or similar uses or changes. Uses that may damage the system area must be avoided.

- (9) **Abandoned Wells.** Any abandoned well on the property must either be properly destroyed, or maintained for future use, in accordance with the Nevada County Land Use and Development Code, Chapter X (well ordinance), before a sewage disposal system permit can be issued and/or receive final approval, and the system is put into use.
- (10) **Operation & Maintenance.** A system must be operated and maintained so that it does not create a public health hazard, public nuisance (as defined in the

California Penal Code) or pollute water. Any special operation and maintenance requirements of a system permit must be followed. See also Section A-026.

- (11) **Septage Haulers.** Septage haulers must submit a quarterly report to the County containing a summary of the volume of septage, (in gallons), the facility where septage was pumped and facility location of where septage is disposed.
- (12) **System Location.** Systems should be located where they will be easily accessible for maintenance and repair. Surface runoff, roof, or other types of drainage must not run onto or into your system.
- (13) **System Failure.** A failing system (see Definitions of Terms) must be immediately repaired, or its use discontinued. The Department may require temporary measures to eliminate a public health hazard.
- (14) **Discrepancies.** If any part of these regulations conflict with other laws or regulations, or is found to be invalid, the other parts of the regulations still remain effective.
- (15) **Other Standards.** If a standard is not specified for a system in this Chapter, the most recently Board of Supervisors-adopted California Plumbing Code standard will be used.
- (16) **Cesspools of any kind or size are prohibited.** Existing cesspools are to be destroyed and replaced within 90 days with an appropriate permitted OWTS.
- (17) **Maximum projected daily flow over 10,000 gallons per day.** Systems with a maximum projected flow of greater than 10,000 gallons per day will need to obtain authorization from the Regional Water Quality Control Board prior to Environmental Health permit issuance.
- (18) **Effluent Disposal that discharges on or above the post installation ground surface such as sprinklers, exposed drip lines, free-surface wetlands, or a pond is Prohibited.**
- (19) **Use of Slopes Greater than 30% without a stability report is Prohibited.** See Section T-064 for further information.
- (20) **OWTS dedicated to receiving significant amounts of waste dumped from RV holding tanks may not be authorized by these regulations. Those who want to construct an RV park or discharge RV wastes using an OWTS must contact the appropriate California Regional Water Quality Control Board and request written authorization from the Water Board for the discharge..**

A-010: DEPARTMENT STAFF QUALIFICATION REQUIREMENTS

A careful evaluation and analysis of the site conditions is essential to the successful siting and long-term operation of a system. This includes the recognition of on-site soils types, potential for groundwater problems, and consideration of the local geology. This goal is accomplished through the cooperative interaction of your private consultant and Department staff.

The State Regional Water Quality Control Boards delegate authority to the County to regulate and permit individual and small community systems. These Boards establish minimum criteria that counties must follow, to protect public health and waters, as well as fulfill requirements of the Porter-Cologne Water Quality Act. In order for the County to implement these regulations and fulfill the mandates of the State Regional Water Quality Control Boards, the following program of on-going staff education and training is required:

Any Department personnel participating in the OSSE process of Section A-014 must be educated and trained in the subject of on-site sewage disposal systems, and possess current registration as an Environmental Health Specialist in the State of California.

(1) Minimum education requirements include:

(A) A bachelor's degree or higher, fulfilling the requirements of the Business and Profession Code for registration as an Environmental Health Specialist in California.

(2) Minimum experience requirements include:

(A) Six months working under the direct supervision of qualified staff in the Department's Land Use Division, conducting OSSEs for on-site sewage disposal systems.

or

(B) One (1) year working as a consultant conducting OSSEs for on-site sewage disposal systems.

A-012: HOW TO GET A SEWAGE DISPOSAL SYSTEM PERMIT

1. Obtain a department findings report (see Section A-014).
2. Make an application for a sewage disposal system permit (see Section A-016).
3. Pay the applicable fees.

A OSSE, a department findings report and a sewage disposal system permit are needed to install, repair, or change a system. This applies whether you are an owner, contractor, company or public agency. A permit will only be issued to an owner or the owner's authorized representative (see Definitions of Terms).

A OSSE is the procedure where your consultant and the Department staff meet at your property and evaluate the site's ability to dispose of sewage. This is where the initial soils testing is done, (i.e., "soil test pit"). Once the OSSE is finished, your consultant will prepare and submit to the Department a OSSE report. The Department will then produce a department findings report, which approves or disapproves a location on the parcel for a sewage disposal system permit application.

The sewage disposal system permit application is the actual process for obtaining the permit to work on your system.

A-014: ON-SITE SOIL EVALUATION (OSSE) PROCESS

- (1) **Review Department Records.** In general, all Department parcel files are public information. You are encouraged to review the property file before you make an application for an OSSE. Proprietary documents may require additional release(s).
- (2) **Obtain A Consultant.** It will be necessary for you to obtain a consultant (see Definitions of Terms) to help in making the OSSE. This person will work with you and the Department, and assist you in making important decisions affecting your parcel. The consultant is the person that performs your percolation tests, examines your soil test pit, and prepares the OSSE report.
- (3) **Submit An Application And Pay The Required Fee**
 - (A) You must then submit an application for an OSSE to the Department and pay the required fee. The Nevada County Board of Supervisors sets the fee.
 - (B) The application form for this service must be filled out completely by the owner or the owner's authorized representative.
 - (C) It is important that sufficient information be provided with the application. This must include (see Diagram 1):
 - (1) An accurate location map. We must be able to find your property.

- (2) A legible copy of the Assessor's plat.
 - (3) Additional information will be helpful. This could include: a copy of the survey map (if available), location of wells, streams, ponds, drainage ways, proposed house site, existing buildings, existing septic system location, rock outcrops, easements, proposed driveways, and so forth.
- (4) **Schedule The OSSE.** Schedule an appointment with the Department to meet at your property to perform the soil tests. "Soil test pits" are excavations with a backhoe to examine the different soil layers. It is essential that the property boundaries are determined prior to the OSSE.
- (5) **Conduct The OSSE.**
 - (A) Your consultant, the backhoe and operator, and the Department representative will all meet at the property.
 - (B) A minimum of two (2) soil test pits (see Definitions of Terms) will be excavated in an area proposed for placing a system. In some cases, more soil test pits will be needed to identify a suitable area for the sewage disposal system. With Department approval, a single soil test pit may be allowed when performing OSSEs for repairs to existing systems.
 - (C) Along with the soil test pits, the overall site will be evaluated by the Department and your consultant for other considerations, such as slope, topography, setbacks, road cuts, etc. The Department will complete a field report for each site evaluated. The field report will contain information that defines all areas tested, and comments on the ability to dispose of sewage.
 - (D) All soil test pits must be protected to prevent people and animals from falling in. There are specific State laws which also regulate this. For greatest safety, the soil test pits should be backfilled upon completion of the evaluation. In any case, all soil test pits must be completely backfilled upon completion of the testing.
 - (E) Where sufficient information is already available for the proposed sewage disposal area, the Department may waive the requirement for soil test pits.
 - (F) For Land Development projects described in Section A-036 where the anticipated sewage disposal rate is equal to or greater than 600gpd/ac., a nitrogen loading and mounding analysis may be required.
 - (i) The nitrogen loading analysis using Hantzsche and Finnemore Equation will demonstrate that the predicted contribution of nitrogen from the site is less than the MCL for drinking water.
 - (ii) The nitrogen mounding analysis will demonstrate that the vertical separation from highest predicted seasonal groundwater can be maintained.
- (6) **Concerning Wet Weather Testing.** Some lots need soil test pits dug and observed during a specific time of year, due to seasonal changes in the groundwater. A Wet Weather test period is defined by the time of year when

high groundwater is most likely to occur.

- (A) For Western Nevada County (all land less than 5,000-foot elevation), Wet Weather conditions begin when at least 22-inches of precipitation have fallen commencing July 1 of each year, with at least 5-inches in the last 30 days, in Nevada City. For Eastern Nevada County, Wet Weather conditions occur during the months of March, April, and May. However, these time periods may change depending on the specific conditions in a year, and may be modified by the Department if necessary.
 - (B) The Department may require that a parcel be tested during the Wet Weather test season before a system site is approved, based on revealing conditions seen in the soil test pit. This requirement may also be set based on historical soils information available for an area.
 - (C) The process for conducting a Wet Weather test is similar to the process for conducting a OSSE. Different types of Wet Weather tests may be permitted based on individual conditions.
- (7) **Have Percolation Tests Performed.** Percolation tests are normally required before a OSSE report can be completed. Percolation tests must be done according to the requirements in the Technical section of these regulations.
- (8) **Obtain A Department Findings Report.** The primary purpose of the OSSE is to determine whether or not a parcel can accommodate a system. If a suitable site is identified at the OSSE, this will be confirmed in the Department's department findings report. It also helps preserve property rights by establishing a probable future sewage disposal site for setback considerations when improvements are proposed for neighboring properties, such as wells, ponds, etc. However, if the OSSE does not identify a suitable area, the OSSE and approval reports will not support the issuing of a sewage disposal system permit.
- (A) Regardless of the outcome of the OSSE, the consultant for the site must provide the Department a OSSE report, including a scaled (1"=50' minimum) site plan identifying the location and results of all soils testing performed. The soils test results provided must show the minimum information required on forms specified by the Department. For sites where a sewage disposal area is identified, the proposed system area and layout must also be shown. The consultant must submit the OSSE report as specified in Section T-052 (3), within 60 days of completion of the OSSE.
 - (B) A site approval report must be prepared by the Department before a sewage disposal system permit application can be accepted. (Exception: a department findings report is not required where soils testing was conducted prior to the adoption of these regulations and the Department finds that the site and prior test results are acceptable.) The department findings report is not a permit to install a system.
 - (C) The department findings report will specify the type(s) of system(s), if any, that can be approved for a specific site. It will also note any specific limitations or conditions that may be part of an approval for a system. If

- an off-site easement is required for a system, this easement must be recorded and a copy of the recording provided to the Department.
- (D) A department findings report is transferable and runs with the land.
 - (E) An area approved for a system in a department findings report will be considered the same as an already installed system, for purposes of determining on-site or off-site setbacks. An owner may appeal a department findings report by written request to the Department.
 - (F) Future changes in laws governing sewage disposal systems may require a modification to the department findings report.
 - (G) The department findings report and approval for a sewage disposal area are based upon property conditions at the date of the report. Changes made to the property may render that area unacceptable. Examples of types of changes include: grading, cuts and fills, new buildings, wells, ponds, etc. Owners must take care not to encumber or alter the approved area in a manner that affects the future system.

A-016: <i>WASTEWATER SYSTEM CONSTRUCTION PERMIT APPLICATION PROCESS</i>

- (1) **Permit Required.** A sewage disposal system permit is needed in order for any person to install, replace, repair, abandon, or change a system. This applies whether you are an owner, contractor, company or a public agency. A septic permit is valid for two (2) years from the date it is issued. It may be renewed under procedures described in Section A-020.
- (2) **Site Approval Report Required.** A department findings report must be on file at the Department before a sewage disposal system permit application for a new installation can be submitted. (Exception: A department findings report is not required where soils testing was conducted prior to the adoption of this Chapter and the Department finds that the site and prior test results are acceptable.) In general, all of the Department's property files are public information, and you are encouraged to review your property's file before you make an application.
- (3) **Obtain A Sewage Disposal System Permit Application.** The owner or the owner's authorized representative must fill out the application for the permit. The application must be filled out completely. You can obtain a package of information as well as an application for a sewage disposal system permit (hereafter "Permit") at the Department. It contains useful and helpful information to assist you. Read carefully the materials you receive to help you make a complete application.
- (4) **Apply For The Sewage Disposal System Permit And Pay The Required Fee.** Make sure your application is complete, and that a department findings report prepared by the Department is in the Department's file. (Exception: a department findings report is not required where soils testing was conducted

prior to the adoption of this Chapter and the Department finds that the site and prior test results are acceptable.) You must pay a permit fee when you make your application. The permit fee varies with the type of permit, and the Nevada County Board of Supervisors determines that amount. A complete application includes, at a minimum:

- (A) A good location map with clear instructions on how to find the property (conditions may have changed since the OSSE).
 - (B) Two (2) copies of a site development plan drawn to scale (see Diagram 2). Scale must not be greater than one (1) inch equals fifty (50) feet. An example of a site development plan is available from the Department. The plan must be drawn so that it is clear and readable. Include the following information on your plans:
 - *Street address and Assessor's Parcel Number;
 - *Property boundaries, dimensions and a North arrow;
 - *All existing and proposed structures/improvements (e.g. houses, barns, wells, driveways, water lines, etc.);
 - *Any physical features, including rock outcrops, creeks, ponds, drainage courses, cuts, fill areas, springs and similar;
 - *Any easements, including roads, water lines, NID, power;
 - *Accurate location of all soils testing done on the property, with numbering to correspond with the department findings report;
 - *Exact location and layout of the proposed system, including any septic tank, pump tank, distribution system, leach field, and 100% replacement area;
 - (C) If it is a special design, include the following:
 - *The consultant's system design work & calculations; and
 - *Two (2) copies of a site development plan with the consultant's wet stamp (original) and signature; and
 - *A Certification from the consultant bearing their original signature and registration number or the stamp of their seal, on a form provided by the Department.
- (5) **Worker's Compensation Responsibility.** When applying for a sewage disposal permit, it is your responsibility to ensure compliance with any/all applicable state law concerning Workers' Compensation coverage.
- (6) **Permit To Be Acted Upon.** The Department will either issue, conditionally approve, or deny the permit application within twenty (20) working days after receipt of your completed application.

A-018: REASONS YOUR PERMIT MAY BE DELAYED OR DENIED

- (1) Every effort is made to ensure that your permit application is reviewed and approved quickly and with a minimum of problems. However, certain situations may result in delays or denial of a permit application, renewal, or transfer. These

include:

- (A) The application is incomplete or contains incorrect information.
 - (B) The proposed system would be in conflict with these regulations, or laws or regulations of another agency.
 - (C) The proposed system is significantly different from what was approved in the department findings report.
 - (D) The proposed system location has been modified or encumbered.
 - (E) A public sewer system is available as follows:
 - (1) For existing parcels, the sewer main is within two hundred (200) feet of any boundary of the property, as measured in a straight line; or
 - (2) For proposed Parcel Maps or Final Maps, the sewer connection point is within five hundred (500) feet of any boundary of the property, as measured in a straight line; and
 - (3) The public sewer connection can be legally and physically achieved.
 - (F) New construction or repairs proposed within 1,200 feet or in the drainage catchment of an intake point for a surface water treatment plant. Notification of the public water system owner is required prior to issuance of a construction or repair permit.
 - (G) Is within the horizontal setback from a public well. Notification of the public water system owner is required prior to issuance of a construction or repair permit.
- (2) If your permit is denied for any reason, the Department will notify you in writing. You may appeal a permit denial by following the appeal procedures of Section A-032.

A-020: THE ISSUED PERMIT

Your permit will be issued with certain conditions. These are tailored to your specific parcel conditions and type of system. The person working on your system shall have a copy of the approved permit and plans. In order to facilitate this:

- (1) The system must be installed according to the permit conditions. Specific conditions of operation and maintenance issued for your septic permit will remain in effect for the life of the system, unless otherwise specified in the permit.
- (2) The person who works on your system must be a licensed contractor or the owner (see Definitions of Terms).
- (3) A copy of your approved permit and plans must be at the job site once the work begins and until the final inspection and approval of the work.
- (4) Your permit is valid for two (2) years from the date it is issued. It may be renewed or transferred by following these procedures:

- (A) Permit Renewal**
- (1)** Your permit may be renewed for a maximum of two (2) additional years. If your permit has expired; a new application and fee are required.
 - (2)** In order to renew your permit, you must make a written request to the Department.
 - (3)** A permit considered for renewal may require review to ensure that there have not been significant changes in technology or knowledge that affect the design of the system. In some cases, the consultant may be required to review their design.
 - (4)** A renewed permit expires when four (4) years have elapsed from the date the permit was first issued. Any further review requires a new permit application and fee to be paid, consistent with subsection (B).
- (B) Re-evaluation of Expired Permits:** An expired permit is no longer valid. In order to obtain a new permit, a new fee and application are required. When the Department performs an evaluation of your expired permit, consideration is given to the following:
- (1)** A recent history of system failures in the area.
 - (2)** The proposed type of system has a history of problems, and/or is no longer approved for use.
 - (3)** The Department was not present for the original soil testing, or there is new information about soils in the area.
- A permit issued in this circumstance is considered a new permit.
- (C) Permit Transfer:** A new owner must make a written request for transfer of the permit upon the change of ownership. Expired permits are non-transferable.
- (5)** If you propose a change to the septic permit (e.g., adding bedrooms, different type of system, new system location, etc.), an additional review fee and new permit conditions may be required.
 - (6)** At times it may be necessary to revise a system design. Either the consultant or the Department may require this due to changes in technology or new information about a particular type of system. This may require the Department to revise the existing permit requirements and/or conditions.

<u>A-022:</u> <i>GETTING YOUR SYSTEM INSPECTED</i>

Be sure to follow the permit conditions and requirements closely. If the approved permit design requires the consultant to inspect the system, make sure you coordinate the construction inspections with both the consultant and the Department. Clear communication with your system installer and consultant is vital.

- (1)** Inspections of the system are required. For special circumstances, an on-site pre-construction meeting may be required. The Department may waive any required inspection with sufficient justification.

- (2) The system must be installed as required by these regulations and any permit conditions. Make sure the installer has a copy of the approved permit and plans. Any changes to the permit or plans must first be approved by the Department and the consultant (if any).
- (3) A request for an inspection must be made to the Department prior to 7:00 AM on the date the inspection. The Department has a 24-hour phone inspection line to make this process convenient. Incorrect or incomplete inspection request information may delay your inspection.
- (4) The system must be ready for the type of inspection you are requesting. All necessary components must be installed and functional. If extra inspections are needed, an additional inspection fee will be charged.
- (5) An accurate "as-built" or record drawing of the complete installed system must be provided to the inspector at the time of final inspection. The "as-built" should include APN, Address, installation date, installers name, contractor's license number if applicable, installers phone number, accurate and identifiable location and dimensions of disposal field, tank and system components related to a permanent known reference point.
- (6) Following the inspection, the Department will provide you with a written notice for inspection(s) made of the system. The notice will indicate if any further work or action is required. The system may only be backfilled (covered) with written approval from the Department. For work that is not approved, a correction notice will be provided that specifies the changes to be made as provided in Section A-040.
- (7) When a consultant's inspection is required, they must provide the Department with a written certification. The certification must indicate that the system has been installed in accordance with the approved design. This is required before a permit can receive final approval.
- (8) Systems must be backfilled within ten (10) days of written approval for backfill from the Department and the consultant (if required), or as specified by the approved design. In any case, the system must be protected from damage caused by weather, earth-moving, or other causes, and must not pose a public health and safety hazard. Adequate erosion control measures must be in place in accordance with applicable requirements of other county regulations.
- (9) The Department will issue a Certificate of Satisfactory Completion for the system upon satisfactory completion of the requirements of the permit and these regulations.

A-024: HOW TO MAKE CHANGES OR REPAIRS TO YOUR EXISTING SYSTEM

- (1) **A Permit Is Required.** A system permit is required for you to change, alter, or increase the sewage flow to your existing system. However, a permit is not required for servicing or replacing installed mechanical or electrical parts of the system. This would include such items as: float switches, pumps, electrical box, sanitary tee in the septic tank, etc. (Note: a building permit may be needed for some of this work—check with your local building authority). Replacement or addition of a septic tank or leachfield does require a sewage disposal system permit.

- (2) **Obtain An OSSE.** For certain types of changes or alterations to your system, a OSSE may be required, as described in Section A-014. For purposes of this Section only, the Department may waive the requirement of a consultant for the OSSE. Examples of situations that may require an OSSE include: a failing system, adding a bedroom to your house, and relocating your system.

- (3) **Make Your Permit Application.** The process for applying for this type of permit is similar to the procedure described in Section A-016. A permit will be issued if the regulation’s requirements can be met, there is an approved department findings report (if applicable), and the proposed system will not create a public health hazard or degrade or pollute the public waters.

- (4) **Special Considerations for System Repairs.** A failing system (See Definition of Terms (89)) creates a public health hazard and/or can pollute water.
 - (A) A failing system must be immediately repaired, or its use immediately discontinued. The Department will require temporary measures to eliminate a public health hazard.
 - (B) If an immediate repair cannot be accomplished, the Department may allow a delay in making the repair. In this case, a Notice of Violation will be issued as described in Section A-040 (3), and will specify temporary measures required to eliminate the immediate public health hazard or pollution of public waters.
 - (C) If the site will allow for a standard system, this type of system must be used.
 - (D) If the site does not meet the requirements for a standard system, the Department may approve a permit for a special design system so long as those requirements can be met.
 - (E) If the site does not meet the requirements for a standard or special design system, the Department may approve a permit for a variance or other repair in order to eliminate a health hazard.
 - (F) Where no type of system can be approved, the system must be abandoned as described in Section A-028.

A-026: MONITORING AND MAINTENANCE OF YOUR SYSTEM

- (1) With the advent of approval of new and innovative methods to develop on-site sewage disposal systems comes the responsibility and requirements to ensure that these types of systems will function properly. While these systems provide a greater ability to utilize parcels previously designated as “unbuildable”, failure to properly operate, monitor and maintain these types of disposal systems will lead to subsequent failure, resulting in health hazards, water pollution, and financial and legal woes for the property owner.
- (2) A program of monitoring, operation and maintenance of systems is specified below. Additional performance criteria will be developed by the Department in alliance with the community to more fully implement the overall program framework described below.

The additional performance criteria will be reviewed by the Sewage Disposal Technical Advisory Group and the California Regional Water Quality Control Board.

- (3) This program will be administered by the Department to ensure safe property development and use of these systems. Refer to Section T-054 Special Design System Requirements.
- (4) The program includes, at a minimum:
 - (A) All applicable special design systems.
 - (B) Property owners obtaining a permit for these systems, or new owners taking legal possession of an existing system, are required to sign and record an Agreement with the property title. The Agreement states that the owner will operate and maintain these systems and comply with all applicable requirements in existence, or as may be lawfully changed from time-to-time as described in sub-section (D) below.
 - (C) Property owners obtaining a permit for these systems, or new owners taking legal possession of these systems, are required to sign and record a Right of Entry Agreement and Monitoring and Maintenance Agreement with the property title. The Right of Entry Agreement and Monitoring and Maintenance Agreement permits Department staff or Certified System Service Providers hired to fulfill the requirements of this Section, to enter upon the property at reasonable times and with prior notification, by procedures approved by the Nevada County Board of Supervisors.
 - (D) The Department may implement changes in requirements for the monitoring, inspection, and maintenance of these systems for just cause, and upon review by the Sewage Disposal Technical Advisory Group, based on new or revised information, or practical experience.
 - (E) Monitoring, inspection and/or maintenance may only be performed by persons who are currently registered, licensed, or certified by the State of California under the Business and Professions Code, and fulfill the

requirements of sub-section (F) that follow. Other professional classifications may be considered by the Department on a case-by-case basis.

- (F) All persons performing the monitoring, inspection or maintenance service on these systems must be Certified System Service Providers by passing a test administered by the Department, demonstrating knowledge and competency in applicable sewage disposal principals. The certification must be valid and current in order to provide this service.
 - (G) Department staff may make periodic quality assurance checks to ensure that certified system service providers are adhering to the requirements of the regulations, and policies and procedures established for implementation of the regulations. The Department may suspend or revoke a person's certification for just cause.
 - (H) All owners of systems covered by this Section will possess and maintain an annual operating permit issued by the Department. The operating permit may be suspended or revoked for failure to adhere to the requirements of the regulations, policies and procedures established for implementation of the regulations. The Department is authorized to take enforcement action described in Section A-040 to ensure that the system does not create a health hazard or pollution.
- (5) Enforcement action may be taken under any applicable Section of these regulations. For purposes of this Section, a system which is not in compliance with this Section may be considered a "failing system", and corrective actions may be taken by the Department as described in Section A-024 (4).

A-028: <i>HOW TO ABANDON A SYSTEM</i>

- (1) **When A System Must Be Abandoned.** Your system must be abandoned under the following situations:
 - (A) If you have connected to an approved sewer system.
 - (B) The system will no longer be used.
 - (C) If you have received a notice or order from the Department to abandon the system (for reasons such as: the system has failed and cannot be repaired, an illegal system, etc.).
- (2) **How To Abandon The System.**
 - (A) A permit must be obtained before you abandon a system. The application for abandoning the system must include:
 - (1) Two (2) copies of a site plan showing where the septic tank and leachfield are located.
 - (2) A description of how the system will be abandoned.
 - (B) The septic tank must be pumped by a licensed septic tank pumper (a list of licensed pumpers is available from the Department) to remove the

contents. You must provide a receipt to the Department showing that this was done.

- (C) The septic tank must be abandoned as follows:
 - (1) If possible, the septic tank cover will be collapsed, or,
 - (2) If the septic tank cover cannot be collapsed, the tank will be filled so that there is not a cave-in or other structural hazard, or,
 - (3) The septic tank may be removed to a facility approved to accept septic tanks, and
 - (4) The septic tank or excavation hole must be filled with clean earth, sand, gravel, or other material approved by the Department.
- (D) The building wastewater plumbing system, if not connected to an approved septic or sewer system, must be permanently capped.
- (E) Future construction in the abandoned system area may require special construction considerations.
- (F) Additional permit requirements may be necessary in order to mitigate unique problems associated with the abandonment of the system.

(3) Obtain Final Approval of System Abandonment Permit.

A-030: HOW TO OBTAIN A VARIANCE

You can apply for a variance from any requirement of these regulations. However, a variance can only be given to reduce or modify a requirement, not eliminate it entirely. In reviewing a variance, sufficient information must be provided by the applicant so that the Director can make a finding that there will not be a health hazard or pollution created, along with other requirements listed below.

- (1) No variance will be granted that constitutes a grant of a special privilege inconsistent with limitations placed upon other properties in the vicinity and zoning district. An application for a variance must show:
 - (A) Special circumstance(s) exist(s) for the property that create(s) a unique hardship, or that will deprive the owner of privileges enjoyed for other property in the vicinity and zoning district in which such property is located; and
 - (B) The hardship was not intentionally caused by the action of the applicant; and
 - (C) Granting the variance would not have any significant adverse environmental effect and would not significantly affect use of adjoining property; and
 - (D) Reduction of requirements would not present a public health hazard or the pollution or degradation of public waters.
 - (E) For new and replacement OWTS, installed on parcels of record existing at the time prior to January 1, 2013, that cannot meet the horizontal separation requirements for surface water intakes and public wells, the OWTS shall meet the horizontal separation to the greatest extent practicable and shall utilize supplemental treatment for pathogens as

specified in section 10.8 of the State OWTS Policy. Supplemental treatment for pathogens requires components designed to perform disinfection shall provide sufficient pretreatment of the wastewater so that effluent from the supplemental treatment components does not exceed a 30-day average TSS of 30 mg/L and shall further achieve an effluent fecal coliform bacteria concentration less than or equal to 200 Most Probable Number (MPN) per 100 milliliters (OWTS Policy 10.10.1.) In addition, the minimum soil depth and the minimum depth to the anticipated highest level of groundwater below the bottom of the dispersal system shall not be less than three (3) feet. All dispersal systems shall have at least twelve (12) inches of soil cover. (OWTS Policy 10.10.2.)

- (2)** The procedure for applying for a variance is as follows:

 - (A)** Obtain an information packet from the Department. It includes useful and helpful information to assist you. Read carefully the materials you receive to help you make a complete application. "In some instances, an exemption or exception to a prohibition may be issued by the appropriate Regional Water Board. The proponent of the project will be required to obtain the authorization or requirements separately and will also be required to provide these as part of the final package submitted to the Department.
 - (B)** Submit the completed application and any needed supplemental information to the Department. You must pay a review fee at that time. The Nevada County Board of Supervisors sets the fee.
- (3)** The Director or designated staff will review and investigate the variance application and either approve, conditionally approve, or deny it in writing within fifteen (15) working days from the date a completed application was received. For unique, lengthy, or complex variances, the applicant may choose to waive the 15-day time period in writing to the Department. California Environmental Quality Act (CEQA) time frames apply to projects where CEQA review is required for that variance. Variances are reviewed on a case-by-case basis.
- (4)** After conclusion of the investigation, the Director will prepare a written order of specific findings of fact and reasons for granting or denying your variance.
- (5)** An applicant or any person interested in the variance may appeal any decision of the Director regarding the variance. See Section A-032 for the appeal procedure.

A-032: *HOW TO APPEAL A DECISION MADE BY THE DEPARTMENT*

Appeal Procedure. Any Department decision can be appealed. The appeal is initially routed through the Department to the Sewage Disposal Technical Advisory Group. The decision by the Sewage Disposal Technical Advisory Group may be appealed to the Board of Supervisors.

- (1) An appeal application form is available from the Department. The appeal form must be filled out completely and returned to the Department with the appropriate fee within twenty (20) working days of the date of the decision. It is important that you provide any necessary information in support of your appeal (see the form for guidance).
- (2) A hearing will be scheduled within twenty (20) working days of receipt of a completed appeal application. You will be notified of the date, time and place of the hearing. The chairperson of the Sewage Disposal Technical Advisory Group will conduct the meeting. After consideration of all the relevant information, the Sewage Disposal Technical Advisory Group will provide a written decision on the appeal that may affirm, modify, or reverse the Department's decision. This decision will be provided within twenty (20) working days of the hearing.
- (3) You may appeal the decision of the Sewage Disposal Technical Advisory Group to the Nevada County Board of Supervisors. An appeal application form is available at their office. The appeal form must be filled out and returned with the appropriate fee to the Nevada County Board of Supervisors within ten (10) calendar days of the written decision by the Group.
- (4) Upon receipt of your appeal, a hearing will be scheduled and a decision rendered according to the procedure established for land use appeals in Article 33 of Chapter II of the Nevada County Land Use and Development Code. After consideration of all the relevant information, the Nevada County Board of Supervisors will provide a written decision on the appeal that may affirm, modify, or reverse the Sewage Disposal Technical Advisory Group's decision. The decision of the Nevada County Board of Supervisors is final.

A-034: *SEWAGE DISPOSAL TECHNICAL ADVISORY GROUP*

- (1) **An Advisory Group Will Be Established.** A Sewage Disposal Technical Advisory Group is hereby established. It is comprised of five (5) consultants, one (1) realtor and one (1) licensed contractor one (1) appointed from each Board of Supervisors district, who will serve at the pleasure of that Supervisor. Each Group member will be qualified by experience and training to pass on matters pertaining to sewage disposal. Said Group members may not be employees of the County of Nevada. The members may be selected from the County at large

without regard for supervisorial district.

The Director shall be an ex-officio member and serve as secretary to the Group, but shall have no vote upon any matter before the Group.

- (2) **Sewage Disposal Technical Advisory Group Purpose.** The purpose of the Sewage Disposal Technical Advisory Group will be to:
- (A) Review and recommend proposed revisions and additions to the sewage disposal regulations or sewage disposal ordinance in an advisory capacity.
 - (B) Review and recommend new methods, techniques, and materials for on-site sewage disposal, in an advisory capacity.
 - (C) Serve as an appeal body under the provisions of Section A-032. The Group is not empowered to waive requirements of these Regulations. No member may participate in an appeal to which they are a party.
- (3) **Group Organization.** The Sewage Disposal Technical Advisory Group will elect a chairperson. The group will adopt reasonable rules of procedure and conduct subject to the approval of the Board of Supervisors.

A-036: LAND DEVELOPMENT REQUIREMENTS

- (1) These standards apply to any proposed land development project, including land divisions, use permits, site plans, etc. It is important to demonstrate that a proposed land development project will be able to dispose of sewage safely. Unless otherwise approved by the Department, the OSSE process of Section A-014 will be used to demonstrate sewage disposal.

- (2) The OSSE process listed in Section A-014 must be completed and the OSSE report submitted to the Department concurrently with the project application to the Nevada County Planning Department.

The location of the OSSE must be in a place on the site where a system could be located so as not to conflict with any other applicable county requirements, including, without limitation, those contained in the county General Plan or the county zoning regulations, for example, site development standards to protect environmentally sensitive resources (such as wetlands, landmark groves of hardwood trees or steep slopes).

- (3) Requirements for subdivisions:
- (A) This is the minimum number of OSSE reports that must be submitted at the time of application to the Nevada County Planning Department:

<u>Parcel Size</u>	<u>Percent To Be Tested</u>
Less than 5 acres:	Each proposed parcel
5 up to 9.99 acres:	50% of proposed parcels
10 up to 19.99 acres:	30% of proposed parcels
20 acres or greater:	10% of proposed parcels

All proposed parcels must have a satisfactory department findings report as specified in Section A-014 (8), prior to recordation of the map. This requirement may be waived by the Department for subdivisions creating parcels 40 acres or greater.

- (B)** The OSSE locations must be distributed throughout the subdivision so as to be representative of logical building sites in the varying conditions found.
- (C)** The supplemental map recorded with the final record map must include a Minimum Useable Sewage Disposal Area for each proposed parcel. The site for the Minimum Useable Sewage Disposal Area shall meet all the requirements for a Standard or Special Design system, except that slopes cannot exceed 30%. The site must also meet the setback distances as shown in Table 1 of these regulations. Prior to final map approval the consultant of record must approve the representation of all pertinent soils test locations and the MUSDA locations. The supplemental map shall include the following statement "The MUSDA's represent a 3 bedroom installation. Any larger systems may require additional soils testing".

- (D) The Minimum Useable Sewage Disposal Area must meet the following size requirements:

Design Percolation Rate	Pressurized Distribution	Supplemental Treatment	Gravity-Flow Distribution
1-5	*	6,000 ft ²	*
6-20	6,000 ft ²	6,000 ft ²	9,000 ft ²
21-40	8,000 ft ²	8,000 ft ²	12,000 ft ²
41-60	10,000 ft ²	10,000 ft ²	15,000 ft ²
61-90	13,000 ft ²	13,000 ft ²	18,000 ft ²
91-120	15,000 ft ²	15,000 ft ²	*
121-240	*	18,000 ft ²	*

*This type of system is not allowed for the creation of parcels.

- (E) Where there is an existing system on a proposed parcel in a subdivision, the Department may permit a system evaluation in place of providing a Minimum Useable Sewage Disposal Area. The system evaluation may include an on-site inspection of the system, an OSSE, and demonstrating a 100% repair area. If the results of the system evaluation are satisfactory, the 100% repair area will be shown on the supplemental map for the final record map, instead of a Minimum Useable Sewage Disposal Area for that parcel.
- (4) Except for Centralized Systems as defined in Chapter L-VI Article 3 of the Nevada County Land Use and Development Code, off-site sewage disposal easements may not be used for creating parcels.
- (5) All other land development projects must provide at least one approved OSSE report, unless otherwise approved by the Department. Depending upon the scope and nature of the project, the Department may require additional soils testing in order to ensure an adequate system.

**A-038: *CENTRALIZED SEWAGE DISPOSAL SYSTEM
REQUIREMENTS***

Centralized sewage disposal systems must meet the requirements of the Nevada County Land Use and Development Code Chapter L-VI Article 3.

A-040: *ENFORCEMENT AND PENALTIES FOR NON-COMPLIANCE*

Most residents of Nevada County strive to meet the necessary requirements to ensure that sewage is disposed in a safe and healthful manner. The Department stresses education and cooperation over enforcement. However, when a violation of these regulations exist or the public health could be threatened, this Section applies.

- (1) **Violations.** It is unlawful to construct, install, replace, alter, enlarge, operate, abandon, maintain, or to increase sewage flows to a system, except in conformance with these regulations. Any person who violates any of the regulations or conditions of a permit or causes or maintains a public health hazard may be charged criminally or be subject to civil abatement action to stop the violation, and may be assessed fines, penalties and/or costs.

- (2) **Right of Entry.** The Health Officer, Code Enforcement Officer and the Department are authorized to enforce the requirements of these regulations. Any of them may enter upon any premises to make inspections and perform tests for the purpose of enforcement of code provisions or these regulations or the abatement of a public health hazard or public nuisance, so long as they do so in compliance with State and Federal law. If consent is not given to a search where necessary, an administrative inspection warrant may be secured upon reasonable cause, allowing the inspection.

- (3) **Enforcement Actions.** When a violation, public health hazard or public nuisance has been verified, a Notice of Violation, Correction Notice, and/or Stop Work Order may be issued. A sewage disposal system permit may also be suspended or revoked and any enforcement action permitted by law may be commenced to cure the violation.
 - (A) **Notice of Violation:** The Department may issue a Notice of Violation which directs 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. Any further enforcement action permitted by law may be commenced to cure if there is a failure to comply with the requirements of a Notice of Violation.

 - (B) **Correction Notice:** The Department 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 these regulations and/or

conditions of the sewage disposal system permit or operating permit. The Correction Notice will state the measures that must be taken to correct the violation. Failure to comply with the requirements of a Correction Notice is a violation of these regulations, and is subject to any enforcement action permitted by law.

- (C) **Stop Work Order:** The Department may issue a Stop Work Order for work that is in violation of these regulations, 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 Department. Failure to comply with the requirements of a Stop Work Order is a violation of these regulations, and is subject to any enforcement action permitted by law.
- (D) **Permit Suspension or Revocation:**
- (1) When the construction or operation of a system is in violation of these regulations or conditions of the permit, or where a person has misrepresented any material fact in the application for a permit, the Department may suspend or revoke the permit.
 - (2) The Department will provide the owner a written notice of intent to suspend or revoke a permit. The owner will be given the opportunity to request a hearing before the Department. A written request for a hearing must be received by the Department within ten (10) working days of the Department's written notice. A failure to request the hearing within the ten (10) working days is deemed a waiver of the right to a hearing.
 - (3) The Department will schedule a hearing within ten (10) working days from the receipt of a written request for a hearing. The Director of the Department shall conduct the hearing. The decision resulting from the hearing may be appealed in accordance with the appeal procedures of Section A-032.
 - (4) No work, use or operation may continue on a system where the permit has been suspended or revoked. Work or operation on a system may recommence only upon reinstatement of the permit in writing by the Department. A permit that has been revoked will not be reinstated. Before any work, use or operation will be allowed for a revoked permit, a new permit must be applied for and issued by the Department.
- (E) **Recordation of Notice of Violation:** If a procedure has been otherwise adopted by the County for recordation of Notices of Violation, a Notice of Violation of these regulations may be recorded with the County Recorder's office following those procedures.

A-042: WOLF CREEK ADVANCED PROTECTION MANAGEMENT PROGRAM

Wolf Creek has been identified by the State Water Resources Control board as an impaired water body where: (1) it is likely that operating OWTS will subsequently be determined to be a contributing source of pathogens and therefore it is anticipated that OWTS would receive a loading reduction, and (2) it is likely that new OWTS installations discharging within 600 feet of the water body would contribute to the impairment.

All new or replacement OWTS within 600 feet of Wolf Creek will require consultation with the RWQCB prior to the issuance of any construction permit or variance. It is anticipated that all new and replacement OWTS must meet the applicable specific requirements of Tier 3 of the OWTS Policy. In general, OWTS within the setback will be expected to meet the following requirements.

- (1) Supplemental treatment components designed to perform disinfection shall provide sufficient pretreatment of the wastewater so that effluent from the supplemental treatment components does not exceed a 30-day average TSS of 30 mg/L and shall further achieve an effluent fecal coliform bacteria concentration less than or equal to 200 Most Probable Number (MPN) per 100 milliliters.
- (2) The minimum soil depth and the minimum depth to the anticipated highest level of groundwater below the bottom of the dispersal system shall not be less than three (3) feet. All dispersal systems shall have at least twelve (12) inches of soil cover.
- (3) Supplemental treatment shall be designed to meet the applicable performance requirements above and shall be stamped or approved by a Qualified Professional.
- (4) Prior to the installation of any proprietary treatment OWTS in an Advanced Protection Management Program, all such treatment components shall be tested by an independent third party testing laboratory.
- (5) The ongoing monitoring of OWTS with supplemental treatment components designed to meet the performance requirements in (1) above shall be monitored in accordance with the operation and maintenance manual for the OWTS or more frequently as required by the local agency or Regional Water Board.
- (6) OWTS with supplemental treatment components shall be equipped with a visual or audible alarm as well as a telemetric alarm that alerts the owner and service provider in the event of system malfunction. Where telemetry is not possible, the owner or owner's agent shall inspect the system at least monthly while the system is in use as directed and instructed by a service provider and notify the service provider not less than quarterly of the observed operating

parameters of the OWTS.

- (7)** OWTS designed to meet the disinfection requirements in (1) above shall be inspected for proper operation quarterly while the system is in use by a service provider unless a telemetric monitoring system is capable of continuously assessing the operation of the disinfection system. Testing of the wastewater flowing from supplemental treatment components that perform disinfection shall be sampled at a point in the system after the treatment components and prior to the dispersal system and shall be conducted quarterly based on analysis of total coliform with a minimum detection limit of 2.2 MPN. All effluent samples must include the geographic coordinates of the sample's location. Effluent samples shall be taken by a service provider and analyzed by a California Department of Public Health certified laboratory.
- (8)** Supplemental treatment components designed to perform disinfection shall provide sufficient pretreatment of the wastewater so that effluent from the supplemental treatment components does not exceed a 30-day average TSS of 30 mg/L and shall further achieve an effluent fecal coliform bacteria concentration less than or equal to 200 Most Probable Number (MPN) per 100 milliliters.
- (9)** The minimum soil depth and the minimum depth to the anticipated highest level of groundwater below the bottom of the dispersal system shall not be less than three (3) feet. All dispersal systems shall have at least twelve (12) inches of soil cover.
- (10)** OWTS with supplemental treatment shall be designed to meet the applicable performance requirements above and shall be stamped or approved by a Qualified Professional.
- (11)** Prior to the installation of any proprietary treatment OWTS, all such treatment components shall be tested by an independent third party testing laboratory.
- (12)** The ongoing monitoring of OWTS with supplemental treatment components designed to meet the performance requirements in this section shall be monitored in accordance with the operation and maintenance manual for the OWTS or more frequently as required by the County or Regional Water Board.
- (13)** OWTS with supplemental treatment components shall be equipped with a visual or audible alarm as well as a telemetric alarm that alerts the owner and service provider in the event of system malfunction. Where telemetry is not possible, the owner or owner's agent shall inspect the system at least monthly while the system is in use as directed and instructed by a service provider and notify the service provider not less than quarterly of the observed operating parameters of the OWTS.
- (14)** OWTS designed to meet the disinfection requirements in this section shall be inspected for proper operation quarterly while the system is in use by a service provider unless a telemetric monitoring system is capable of

continuously assessing the operation of the disinfection system. Testing of the wastewater flowing from supplemental treatment components that perform disinfection shall be sampled at a point in the system after the treatment components and prior to the dispersal system and shall be conducted quarterly based on analysis of total coliform with a minimum detection limit of 2.2 MPN. All effluent samples must include the geographic coordinates of the sample's location. Effluent samples shall be taken by a service provider and analyzed by a California Department of Public Health certified laboratory.

<u>A-043:</u> <i>LIABILITY</i>
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Department staff charged with the enforcement of these regulations, when acting within the scope of their public employment, are protected from liability by the immunities available to public employees under the California Tort Claims Act (see California Government Code sections 820, et seq.), including, but not limited to, not being liable for adoption or failure to adopt or enforce an enactment; issuance, denial, suspension, or revocation of a permit, failure to inspect, or negligent inspection of, property; and institution or prosecution of judicial or administrative proceedings.

A-044: TABLE 1-SETBACKS

TABLE 1

If a setback is not specified in this Table, the most recently Board of Supervisors-adopted Uniform Plumbing Code setback will be applied.

FEATURES REQUIRING SETBACK: MIN. HORIZONTAL SEPARATION DISTANCE IN FEET

DISTANCE REQUIRED FROM: ↓	FROM DISPOSAL FIELD INITIAL AND REPLACEMENT AREA	FROM SEPTIC TANK AND SAND FILTER	FROM VAULT PRIVY
Wells			
Public well	200' ¹²	200' ¹²	200' ¹²
Private well	100'	100' ¹	150'
Other wells, excluding monitoring wells	100'	100' ¹	150'
Surface waters ²			
Reservoirs, lakes, springs, ponds, or perennial streams	100' ³ /600' ¹⁴	100' ^{1, 3} /600' ¹⁴	150'
Intermittent streams	50' ³	25'	50'
Public Surface Water Intake	1,200' to intake - 400' from high water mark ¹³	1,200' to intake - 400' from high water mark ¹³	1,200' to intake - 400' from high water mark ¹³
Artificial drains--Vertical/Curtain drains			
Upgradient of system	15' ⁴	15' ⁴	25'
Downgradient of system	50'	25'	50'
Water canals ²			
Flat area	100' ³	100' ^{1, 3}	150'
Sloping area			
-Upgradient	clear ROW ⁵	clear ROW ⁵	25'

DISTANCE REQUIRED FROM: ↓	FROM DISPOSAL FIELD INITIAL AND REPLACEMENT AREA	FROM SEPTIC TANK AND SAND FILTER	FROM VAULT PRIVY
-Downgradient	100'	100' ¹	150'
Cuts manmade in excess of 2.5 feet (top of downslope cut) or escarpments	4 X height ⁶ of the bank, to a maximum of 50'	10'	4 X height ⁶ of the bank, to a maximum of 50'
Property lines Adjacent property with public water Adjacent property with private water	10' 10' ⁷ or 50'	5' 10'	200' 200'
Foundation lines of any structure including garages, out-buildings	8'	5' ⁸	5'
Swimming pools In-ground Above-ground	20' 5'	20' 5'	20' 5'
All Water lines	10' ⁹	5' ¹⁰	10'
Public Water System Intake			
Easements ¹¹	Clear	Clear	Clear
Roadside Drainage			

FOOTNOTES:

1. The 100-foot setback from a septic tank to a well, surface water or canal, may be reduced to 50-feet if the tank is bedded on a 6" layer of sand or ¾" minus aggregate, and passes a water-tight test.
2. Setbacks shall be measured from the edge of the 10-year historic high water level (western county) or the 100-year historic high water level (eastern county). For western county, where a flood plain is indicated on a FEMA map, the 100-year setback shall be utilized unless a 10-year flood plain has been delineated by a drainage study or other approved methods. In no event shall a system be placed within a 100-year flood plain or within an area of special flood hazard as defined in the Flood Plain Management Regulations contained in Chapter XII of the Nevada County Land Use and Development Code.
3. Where the deepest portion of the surface water liquid level is higher in elevation than the highest liquid level in the leachfield, this setback may be reduced to twenty-five (25) feet.

4. Where the deepest portion of the curtain drain liquid level is higher in elevation than the highest liquid level in the leachfield, this setback may be reduced to ten (10) feet. For septic tanks, this setback may be reduced to ten (10) feet if the tank is bedded on a 6" layer of sand or ¾" minus aggregate, and passes a watertight test.
5. "ROW" = Right of Way
6. The height (in feet) of the cut or escarpment as measured from the toe of the cut or escarpment vertically to the projection of the natural ground slope.
7. The ten (10) feet separation applies where adjacent parcels have been developed with a dwelling and approved water supply as defined in Chapter X, Land Use and Development Code. The 50-foot separation shall be used when adjacent parcels have not been so developed. For subdivisions, disposal fields may be ten (10) feet from interior property lines in private well areas if a well has been drilled on the affected parcel and meets Department standards for an approved domestic water supply. The greater setback shown above shall apply to parcels adjacent to the subdivision.
8. The Department encourages the placement of septic tanks and other treatment units as close as feasible to the minimum separation from the building foundation in order to minimize possible clogging of the building sewer.
9. A water line constructed of materials approved for use within a building and sleeved in schedule 40 pipe (or approved equivalent) may cross a leach field so long as the water pipe is installed above the highest liquid level of the leachfield, and the sleeve extends a minimum of ten (10) feet on both sides of the leachfield and is constructed so as to be watertight.
10. A water line constructed of materials approved for use within a building may be installed crossing a septic tank so long as a minimum of one (1) foot of vertical separation is maintained.
11. A system may be installed underneath overhead power lines or cross other utilities (e.g., canals) providing all of the following conditions are met:
 - (a) Written authorization is received from the utility company operating and maintaining the utility affected or for which the easement or restriction was granted;
 - (b) The Department determines that the encroachment is necessary and there is no other viable area in which to install the system; and
 - (c) All construction modifications required by the Department and the affected utility company(ies) are instituted to carry out the purposes of these regulations. Unless otherwise approved, canal crossings shall be made in conformance with current construction requirements of the Nevada Irrigation District.
12. Dispersal Components deeper than 20 feet deep that are within 600 feet of a public well requires a 2-year travel time for microbiological contaminants shall be evaluated. Set back shall not be less than 200 feet.
13. If located 1,200 to 2,500 feet from intake the dispersal field can be reduced to 200 feet from the high water mark.
14. New and replacement OWTS along areas identified as Impaired per Attachment 2 (Wolf Creek) of the OTWS Policy will require supplemental treatment and disinfection as defined in A-042.

TECHNICAL SECTION

T-052: STANDARD SYSTEM REQUIREMENTS

- (1) **General statement.** A standard system is a system consisting of a septic tank, distribution unit and gravity-flow disposal field constructed with a minimum of six (6) inches of filter material below a minimum three (3) inch diameter distribution pipe, and maintaining not less than four (4) feet of effective soil depth below the bottom of the trench.
- (2) **Criteria for approval.** In order to be approved for a Standard System, each site must meet the applicable requirements of the Administrative regulations, and all of the following:
 - (A) Effective soil depth shall extend a minimum of six (6) feet in the disposal area and replacement area and shall extend a minimum of four (4) feet below proposed disposal trench bottoms;
 - (B) Groundwater is not present for at least four (4) feet below the proposed disposal trench bottoms;
 - (C) Soils in the proposed disposal area and replacement area are either sandy loam, sandy clay loam, sandy clay, loam, non-expansive clay, silt loam, or clay loam, or, the design percolation rate is six (6) to sixty (60) minutes per inch;
 - (D) The slope shall not exceed thirty (30) percent within the disposal area and replacement area;
 - (E) A minimum one-hundred (100) percent replacement area shall be available;
 - (F) The site has not been filled or the soil has not been modified in a way that would adversely affect functioning of the system;
 - (G) The site shall not be on an unstable landform, where operation of the system may be adversely affected;
 - (H) The site of the disposal area and replacement area shall not be covered by asphalt or concrete, or subject to the activity associated with vehicular traffic, corrals, pens, arenas or other concentrations of livestock, or other activity which would adversely affect the soil or integrity of the system;
 - (I) The site of the disposal area and replacement area shall not be subjected to excessive saturation due to, but not limited to, artificial drainage, driveways, road and roof drains;
 - (J) Setback criteria in Table 1 (contained in Section T-112) can be met.
- (3) **Site evaluation report requirements.** The consultant must submit a site evaluation report including the following information to the Department in order

for the Department to prepare a site approval report as detailed in Section A-014 (8). Soil properties must be described using standard USDA–Natural Resources Conservation Service terminology as defined in “Soil Survey Manual, Agricultural Handbook No. 18, 1993”. The site evaluation report must include the following information:

- (A)** A scaled site map showing the location and identification of all soil test pits and percolation test holes. The map must include a North arrow, the percent and direction of slope in the area tested, and site features which affect the location of a system.
- (B)** The soil description for each soil test pit. Every soil test pit must be described, even if the test shows unsuitable soil or is located in an area that will not be used. Each soil test pit description must include the following information:
 - (1)** Slope—percent and direction.
 - (2)** Parent rock type—volcanic, granitic, metasedimentary, alluvium, other.
 - (3)** Effective soil depth.
 - (4)** Depth to groundwater (if observed).
 - (5)** Descriptions of each soil horizon (layer) described, which shall include the following characterization, using the terminology indicated (where provided):
 - a.** Depth of horizon.
 - b.** Soil texture—sand, loamy sand, sandy loam, sandy clay, sandy clay loam, loam, clay, clay loam, silty clay, silty clay loam, silt loam, silt.
 - c.** Soil rock fragment content in percent by volume.
 - d.** Soil color (moist) using the Munsell Soil Color Chart.
 - e.** Redoxymorphic features (if present)—redox concentrations, redox depletions, reduced matrices.
 - f.** Soil structure—granular, platy, or blocky; fine, medium, or coarse; structureless—single grain, or massive.
 - g.** Soil pores—few, common, or many; fine, medium, or coarse.
 - h.** Soil consistence—loose, very friable, friable, firm, very firm, extremely firm, or solid.
 - i.** Soil plasticity—non-plastic, slightly-plastic, plastic, or very-plastic.
 - j.** Soil stickiness—non-sticky, slightly-sticky, sticky, or very-sticky.
 - k.** Soil roots—none, few, common, or many; very fine, fine, medium, or coarse.
 - l.** Soil horizon boundary—smooth, wavy, irregular, or broken; abrupt, clear, gradual, or distinct.
 - m.** Soil moisture—dry, damp, moist, saturated, or seepage.
- (C)** The percolation data sheet(s), correction factor calculation, and average percolation rate.
- (D)** The proposed type of system (e.g., Standard, Capping Fill, Pressurized

Distribution, Pump, Deep Trench, Steep Slope, Intermittent or Recirculating Sand Filter, Mound, Package or Plant) and location with respect to specific soil test pit locations.

- (E) The business name, address and telephone number of the consultant.
- (F) The date that the testing was conducted.

(4) Criteria for system sizing.

- (A) Single-family dwellings. Systems serving single-family dwellings shall be sized at minimum one hundred fifty (150) gallons per day (gpd) projected daily sewage flow. Projected daily sewage flow shall be calculated at one hundred and fifty (150) gallons per day per bedroom.
- (B) Disposal trench sizing for single-family dwellings. The effective absorption area required, shall be based upon the projected daily sewage flow and one of the following:
 - (1) Rate of sewage application based on soil group in chart below.

Soil Group	Rate of Sewage Application
A*	1.2 gpd/ft ²
B	0.8 gpd/ft ²
C	0.6 gpd/ft ²
D	0.45 gpd/ft ²
E*	0.2 gpd/ft ²

- A* sand, loamy sand
- B sandy loam
- C loam, sandy clay loam
- D sandy clay, silt loam, clay loam, non-expansive clay
- E* clay, silty clay, silty clay loam, silt

*Soil Groups A and E are not suitable for a standard system.

OR

- (2) Effective absorption area required, when given the design percolation rate, shall be calculated using the following formulas:
 For gravity-fed trenches: $3.5/\sqrt{t}$
 [For pressure-distribution trenches*: $5/\sqrt{t}$

**Where "t" is the percolation rate in minutes per inch. Percolation rates of less than six (6) minutes per inch (mpi) and greater than sixty (60) mpi, are unsuitable for a standard system. When a pressure-distribution trench is utilized, the sewage disposal system is a special design system, in accordance with Section T-054, et seq.]*

- (C) When sizing by soil group and more than one soil group is encountered within a soil profile, disposal trench sizing shall be based on the most restrictive soil group encountered within thirty-six (36) inches from the bottom of the disposal trench.
 - (D) When sizing by percolation rate and more than one soil group is encountered within a soil profile, disposal trench sizing shall consider the soil characteristics within thirty-six (36) inches from the bottom of the disposal trench, and may require percolation tests in deeper soil layers.
 - (E) For calculating the required lineal feet of the disposal field, only the trench bottom area shall be considered.
- (5) **Percolation test requirements and procedures** (see Diagram 3).
- (A) General requirements.
 - (1) All percolation tests shall be conducted in accordance with the procedures outlined in this section, or as otherwise approved by the Department.
 - (2) Percolation testing shall be required when it is determined by the Department that such testing, when coupled with soil test pit evaluations, is necessary to aid in system sizing and design.
 - (3) Percolation tests are required as part of the site evaluation process for the creation of new lots and parcels.
 - (B) Test hole preparation requirements.
 - (1) Unless otherwise indicated by the Department, there shall be a minimum of three (3) percolation test holes when the disposal area and replacement area are close (close, as determined by the Department); six (6) may be required when the areas are separate (separate, as determined by the Department). More test holes may be required by the Department to completely identify a suitable area.
 - (2) Unless otherwise approved by the Department, the test hole bottom depth shall be equal to the proposed disposal trench bottom depth. A posthole digger or manual auger shall dig the test section (bottom 8 inches) of the test hole.
 - (3) Unless otherwise approved by the Department, the diameter of the test hole shall be from six (6) to eight (8) inches.
 - (C) The test hole sidewall in the test section should be roughened to remove any smearing or compaction caused by the hole excavation process. All loose soil shall be removed and two (2) inches of pea gravel or other material approved by the Department, shall be placed in the bottom of the hole. In order to prevent siltation of the bottom of the hole and sidewall cave-in, a sidewall gravel pack is to be used in accordance with the chart in Section T-052 (5) (F). Two methods for retaining the sidewall gravel pack are:
 - (1) One eighth (1/8) inch mesh galvanized hardware cloth rolled into a cylinder at least twelve (12) inches long;
 - (2) Perforated plastic pipe in twelve (12) inches (or longer) sections.

- (D) Presoak requirement. The hole shall be filled with clean water to a minimum depth of twelve (12) inches above the base of the hole. The presoak shall be maintained for a minimum of twelve (12) hours.

EXCEPTION: During wet-weather testing conditions, the presoak time may be reduced at the discretion of the Department. During dry-weather conditions, the presoak time shall be a minimum of twenty-four (24) hours for soil group "E" [see Section T-052 (4) (B) (1)].

- (E) Test measurement requirements.
- (1) Percolation tests shall be measured to the nearest 1/16th inch from a fixed point.
 - (2) The percolation test shall begin within four (4) hours following completion of the presoak. Adjust the water level to six (6) inches over the pea gravel bottom and begin the test. This may require adding or removing water to adjust the level.
 - (3) Readings shall be taken at thirty (30) minute intervals. Refill as necessary to maintain five (5) to six (6) inches of water over the pea gravel bottom at each interval. Readings shall be taken until two consecutive readings do not vary by more than ten percent per reading, with a minimum of three (3) readings. The last thirty (30) minute interval is used to compute the percolation rate. If four (4) inches or more of water seeps from the hole during the thirty (30) minute interval, readings may be taken at ten (10) minute intervals. Readings shall be taken until two (2) consecutive readings do not vary by more than ten percent per reading with a minimum of three (3) readings. The last ten (10) minute interval is used to compute the percolation rate.
- (F) Test rate determination. The following chart provides a correction factor to determine the corrected percolation rate:

Hole diameter	Gravel thickness	Correction factor
6"	1"	1.59
6"	1/2"	1.27
8"	1"	1.14
7"	1/2"	1.04

Calculation:

Standard percolation value (minutes per inch) =

Test percolation value (minutes per inch) X (correction factor)

Example: A six (6) inch hole is used with a one (1) inch gravel pack. The test percolation value is 25 mpi.

$$25 \text{ mpi} (1.59) = 40 \text{ mpi}$$

40 mpi is the standard percolation value for that test hole and will be used in combination with other test hole results when designing the system. The

mean percolation rate calculated from all test hole results accepted by the Department, shall be the final percolation rate (design percolation rate) assigned for sizing the system.

- (6) **Building sewer design, materials, and construction requirements** (see Diagrams 4, 7,8 & 12). The building sewer shall be constructed with materials in conformance to building sewer standards identified in the California Plumbing Code. The building sewer pipe shall have a minimum diameter of three (3) inches.
- (7) **Septic tank design, materials, and construction requirements** (see Diagram 4).
- (A) Materials and construction. Materials and construction shall be in accordance with Section T-092.
- (B) Liquid capacity. The minimum liquid capacity of any septic tank installed shall be one thousand (1000) gallons.
- (C) Septic tanks to serve single family dwellings shall be sized on the number of bedrooms in the dwelling, as follows:
 1 to 3 bedrooms -----1000 gallons
 4 to 6 bedrooms -----1500 gallons
 For each additional bedroom over 6, add two hundred (200) gallons.
- (8) **Effluent sewer design, materials and requirements** (see Diagrams 4, 5, 7, & 8). The effluent sewer (pipe) shall extend at least five (5) feet beyond the septic tank before connecting to the distribution unit. It shall be installed with a minimum fall of four (4) inches per one hundred (100) feet, but in no instance shall there be less than two (2) inches of fall from one end of the pipe to the other. For installations where more than one (1) disposal trench is utilized with serial distribution, there shall be a minimum of four (4) inches elevation drop from the invert of the septic tank outlet to the invert of the disposal field distribution unit. When connecting a three (3) inch pipe to a four (4) inch pipe, they shall be joined by a fitting that provides a water-tight seal. The effluent sewer pipe materials and construction shall be in conformance with Section T-102.
- (9) **Drop Box and diversion valve design, materials, and construction requirements** (see Diagrams 2, 5, 7, & 8). Drop Box and diversion valve design, materials, and construction shall meet the minimum standards set forth in Sections T-094 and T-096, respectively.
- (10) **Header pipe design, materials, and construction requirements.**
- (A) Unless otherwise approved, header pipe materials and construction shall at minimum, meet the standards set forth in Section T-102.
- (B) The pipe shall be watertight, have a minimum diameter of three (3) inches, and be bedded on undisturbed earth.
- (11) **Disposal trench design, materials, and construction requirements.** (See

Diagrams 2, 6, 7, 8, & 9).

- (A) Disposal trenches shall be constructed in accordance with the standards contained in the following table, unless otherwise specified.
- | | | | |
|-----|---|----------|-----------|
| (1) | Length | maximum: | 100 feet |
| (2) | Bottom width | minimum: | 24 inches |
| | | maximum: | 36 inches |
| (3) | Depth | minimum: | 24 inches |
| | | maximum: | 30 inches |
| (4) | Minimum distance of undisturbed soil between disposal trenches (sidewall-to-sidewall) shall be four (4) feet. | | |
- (B) Disposal trench sizing methods and calculations shall be in accordance with Section T-052 (4).
- (C) Filter material shall extend the full width and length of the disposal trench to a depth of not less than twelve (12) inches. There shall be at least six (6) inches of filter material under the distribution pipe and at least two (2) inches over the distribution pipe.
- (D) A soil barrier shall be placed on top of the filter material to exclude fines from the filter material. The barrier shall consist of suitable filter fabric or a minimum of four (4) inches of straw.
- (E) There shall be a minimum of twelve (12) inches of backfill over the filter material.
- (F) Gravelless trench construction may be utilized instead of filter material in disposal trench. The design, manufacturing and materials used shall be durable and acceptable to the Department. Sizing for the gravelless disposal trench shall the same as for gravel systems.
- (12) Distribution pipe design, materials, and construction requirements.**
- (A) Unless otherwise approved, distribution pipe materials and construction shall meet the minimum standards set forth in Section T-102.
- (B) The distribution pipes shall have a minimum diameter of three (3) inches.
- (C) All perforated pipe shall be installed with centerline markings up.
- (13) Installation requirements.** (See Diagrams 4, 5, 6, 7, 8, & 9)
- (A) Septic tanks shall be installed on a level, stable base.
- (B) Septic tanks located in high groundwater areas shall be weighted or provided with an anti-buoyancy device to prevent flotation.
- (C) All septic tanks shall be installed with watertight risers extending to the ground surface or above. Construction and materials specifications for risers shall be in accordance with Section T-092 (3)(D).
- (D) Septic tanks shall be installed in a location that provides access for servicing and pumping.
- (E) Systems shall not be installed when moist or wet conditions cause trench sidewall or bottom area degradation of soil structure and porosity (which frequently appears as smearing and compaction).
- (F) The bottom of the disposal trench shall be level to within a tolerance of two (2) inches in 100-feet.

- (G) Each disposal trench shall have distribution piping that is centered in the trench and laid level to within a tolerance of two (2) inches in 100-feet.
 - (H) Disposal trenches shall be installed on contour.
 - (I) Prior to backfilling the trench, the filter material shall be covered with filter fabric, straw or other material approved by the Department.
 - (J) Backfill shall be carefully placed to prevent damage to the system.
 - (K) Backfill shall be native soil free of large stones, frozen clumps of earth, masonry, stumps, waste construction materials, or other materials that could damage the system.
 - (L) All Drop Boxes shall be bedded level on undisturbed soil, aggregate with a minimum of 90% compaction, or concrete.
 - (M) Adequate erosion control measures shall be utilized at all times in conformance with applicable county regulations pertaining to excavation and grading (Section L-V, Article 1, Nevada County Land Use & Development Code; the California Building Code; the California Administrative Code).
 - (N) Disposal Field Inspection Risers shall be installed at both ends of each disposal trench. Inspection risers shall be installed in accordance with Diagram 9. Risers shall be sufficiently anchored to prevent accidental removal.
- (14) **Required Inspections.** All portions of the system are subject to inspection and verification prior to covering. The system shall be inspected for conformance with the permit requirements, including all applicable setbacks. The portions normally inspected include:
- (A) A minimum of five (5) feet of the building sewer entering the septic tank.
 - (B) The septic tank, including access into any manhole covers.
 - (C) The effluent sewer, distribution unit, and absorption facility.
- Other portions of the system may be inspected as required by the permit or if deemed necessary by the Department to determine compliance with the Regulations. Additional inspection and Certificate of Satisfactory Completion requirements are specified in Section A-022.
- (15) **Large system requirement.** Systems with a projected daily sewage flow greater than two thousand five hundred (2,500) gallons shall be designed in accordance with the requirements set forth in Section T-090.

T-054: SPECIAL DESIGN SYSTEM REQUIREMENTS
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Note: The Lahontan Basin Plan also contains discharge prohibitions which include discharges from OWTS in certain areas of the County. One such discharge prohibition is against discharges within the 100-year floodplain of the Truckee and Little Truckee Rivers. The Department will not issue permits for new individual onsite waste treatment systems in conflict with a discharge prohibition in the Lahontan Basin Plan, except as authorized by the Lahontan Water Board.

- (1) **A special design system is** any Department-approved system that does not meet standard system requirements.
- (2) **Unless otherwise indicated** in specific special design system sections or by the Department, all provisions pertaining to the site evaluation criteria, design (including sizing), installation, construction, and maintenance of standard systems shall apply to special design systems.
- (3) **Criteria for system sizing.** The sizing criteria for standard systems shall apply to special design systems except as otherwise specified in this section.
 - (A) A design percolation rate less than 6 mpi or greater than 60 mpi shall utilize pressure distribution as the means of distribution in the disposal field, consistent with the requirements of Section T-058.
EXCEPTION: At the discretion of the consultant, systems with design percolation rates of 61-90 mpi may utilize gravity flow in lieu of pressure distribution as the means of distribution in the disposal field.
 - (B) Any proposed design utilizing soil types "A" or "E" shall utilize pressure distribution as the means of distribution in the disposal field, consistent with the requirements of Section T-058.
- (4) **Special design systems shall not be used** in lieu of a standard system when a proposed site can meet the requirements for installation of a standard system.
EXCEPTION. Pressurized distribution may be used in any circumstance where this method of effluent distribution is desired.
- (5) **Periodic inspection of installed systems.** Where required by rule, regulation, or State guideline, periodic inspection of installed special design systems shall be required and/or performed by the Department. An inspection fee may be charged.

The Department shall prepare a report of each inspection. The report shall list system deficiencies and a correction report shall be provided promptly to the system owner. Necessary follow-up inspections shall be scheduled.

- (6) **Commercial Facilities.** Projected daily flows for commercial facilities shall be estimated using Table 2 - Quantities of Sewage Flow (contained in Section T-112). The Department may approve, on a case-by-case basis, metered water use data, data from the most current Board of Supervisors-approved version of

the California Uniform Plumbing Code, or other supporting data in lieu of the estimated sewage flows set forth in Table 2 (contained in Section T-112).

- (7) **Commercial Facilities that prepare foods**, (e.g., kitchens, restaurants) shall install a grease trap or interceptor pursuant to the requirements of the most recently Board of Supervisors-adopted edition of the California Uniform Plumbing Code and amendments thereto, and the requirements of the Administrative Authority having jurisdiction, including a permit if required by the Administrative Authority.
- (8) **Unless otherwise indicated** in a specific section of these regulations, all special design systems shall be designed and installed under the inspection and approval of a Qualified Professional and the Department. A Qualified Professional shall submit written certification that the system has been installed in accordance with the approved construction/design plan and permit conditions. The Department shall not issue a Certificate of Satisfactory Completion for any system installation until certification of the installation is received from a Qualified Professional. The Qualified Professional shall provide the owner with a maintenance manual which outlines the operation of the system, including the owner's responsibilities for maintaining the system.
- (9) **Special design systems approved for the creation of lots, parcels and additional building sites** shall demonstrate a minimum usable sewage disposal area in accordance with the chart in Section A-036 (3)(D).
- (10) **Inspection risers** shall be installed at the end of each disposal trench. Inspection risers shall be constructed in accordance with Diagram 9.
- (11) **Septic tank sizing for commercial facilities**
 - (A) For projected daily sewage flows up to fifteen hundred (1,500) gallons, the septic tank shall have a liquid capacity equal to at least one and one-half (1-1/2) days sewage flow, or one thousand (1,000) gallons, whichever is greater.
 - (B) For projected daily sewage flows greater than fifteen hundred (1,500) gallons, the septic tank shall have a liquid capacity equal to eleven hundred twenty-five (1,125) gallons plus seventy-five (75) percent of the projected daily sewage flow.
 - (C) Additional volume may be required by the Department for special circumstances.
 - (D) The quantity of daily sewage flow shall be estimated in gallons per day using Table 2 - Quantities of Sewage Flow (contained in Section T-112). The Department may approve, for other than single-family dwellings, data from the most current Board of Supervisors-approved version of the California Uniform Plumbing Code.

(12) Permit application and construction/design plan requirements.

An application for a permit shall be made in accordance with the procedure and requirements of Section A-016 and include a construction schedule, (including critical points during construction at which time inspections shall be made by the Qualified Professional).

- (13)** An artificial drain may be required to intercept and/or drain water from a disposal area; however, it may be required to demonstrate that the site can be de-watered prior to issuing a permit. Where required, artificial drains are an integral part of the system, but do not need to meet setback requirements to property lines, streams, lakes, ponds or other surface water bodies. However, artificial drains shall meet the setback requirements to systems as specified in Table 1 (contained in Section T-112). Artificial drains shall be designed by a Qualified Professional and meet the other requirements of Section T-054, as well as minimum materials and construction specifications indicated in Section T-110. Diagram 13 illustrates a typical artificial (curtain) drain design.

T-056: CAPPING FILL SYSTEM REQUIREMENTS

(see Diagram 11)

- (1) General statement.** A capping fill system is a special design system where the disposal trench effective sidewall is installed a minimum of twelve (12) inches into natural soil below a soil cap of specified depth and texture. The shallow construction of the system allows for installation where fractured bedrock, a limiting layer or groundwater is closer to ground surface. This section describes the requirements for *gravity-fed* capping fill systems. *Pressure-dosed* capping fill systems shall meet the requirements of this Section *as well as* Section T-058: "Pressurized Distribution System Requirements".
- (2) Criteria for approval.** In order to be approved for a capping fill system, each site must meet all of the following conditions:
- (A)** The slope shall not exceed twenty (20) percent in the disposal area and replacement area.
 - (B)** Unless otherwise approved by the Department, the effective soil depth shall meet the minimum soil depth of the type of system proposed.
- (3) Design criteria.** Unless otherwise specified, the system shall be designed in accordance with the provisions of Section T-052, standard systems.
- (A)** Disposal trenches: Depth: 12 inches minimum
Width: 24 inches minimum
 - (B)** Cap depth: 36 inches maximum
12 inches minimum (after settling)

- (4) **Installation requirements.** Unless otherwise required by the Qualified Professional, the installation shall meet the installation and construction requirements of Section T-052 and the following:
- (A) The soil to be used for the cap may be examined and shall be approved by the Department prior to placement. The soil texture shall be of the same textural class as the natural topsoil, or of one textural class finer;
 - (B) The disposal area shall have the vegetation removed and shall be scarified, parallel to contours, no deeper than six (6) inches.
 - (C) Soil cap shall extend a minimum of five (5) feet beyond the exterior trench sidewall.
 - (D) The site shall be landscaped for erosion control in accordance with the approved construction/design plan and permit requirements.
- (5) **Required inspections.** Inspection criteria and issuance of a Certificate of Satisfactory Completion shall be in conformance with Section T-052.
- (A) The disposal area and fill material may be inspected for scarification, soil texture, and moisture content.
 - (B) Prior to backfill of the installed disposal system.
 - (C) The final placement of the soil cap may be inspected.
- (6) **Criteria for system sizing.** System sizing shall meet the minimum requirements of Section T-052 (4) and (7).

<i>T-058: PRESSURIZED DISTRIBUTION SYSTEM REQUIREMENTS</i>

(see Diagram 12 & 13)

- (1) **General statement.** Pressurized distribution refers to a method of distributing effluent evenly over the entire soil absorption area through a network of small diameter pipes under low pressure. This method may be a special design for some sites to mitigate the limitations associated with soils with rapid permeability or slow permeability.
- (2) **Criteria for Approval.** Pressurized distribution systems shall meet the following requirements:
- (A) Pressurized distribution systems may be permitted on any site that meets the requirements for standard systems, or on sites approved for special design systems. The pressurized distribution system shall meet all the applicable requirements for a system as stated in Section T-052 unless otherwise specified.
 - (B) The proposed disposal area and replacement area shall demonstrate a minimum of four (4) feet of effective soil depth beneath the disposal trench bottom. For soil types "D" & "E" defined in Section T-052 (4)(B)(1.), this distance may be reduced to no less than three (3) feet of effective soil depth.

- (C) For existing lots or parcels, pressure distribution systems may be installed in soil Groups A, B, C, D, or E, as identified in Section T-052 (4), or percolation rates 1-240 minutes per inch.
- (D) For creating lots and parcels, pressure distribution systems may be installed in Soil Groups B, C, D, and E as identified in Section T-052 (4), or percolation rates 6-120 minutes per inch.
- (E) System monitoring and inspections requirements in conformance with Section A-026.

(3) Design, materials and construction requirements.

- (A) General.
 - (1) All materials used in pressurized systems shall be structurally sound, durable, and capable of withstanding normal stresses incidental to installation and operation.
 - (2) Nothing in these rules shall be construed to set aside applicable building, electrical, or other codes. An electrical permit and inspection from the local Administrative Authority shall be obtained if required for pump wiring installation.
- (B) Criteria for system sizing. The disposal area and septic tank capacity shall at a minimum meet the provisions of Section T-052 (4) and (7). For systems where trench depth is less than 24-inches, percolation tests shall be performed in the layer of most restrictive permeability that occurs within four (4) feet of the trench bottom. The deeper percolation test data shall be considered in the design of the system.

Application rate shall be as follows:

 - 1. $3.5/\sqrt{t}$ (t) if sidewall area is to be considered, i.e. deep trench, pressure dose or;
 - 2. $5/\sqrt{t}$ (t) in considering trench bottom area only, i.e. conventional pressure dose system.
- (C) Pressurized distribution lateral requirements. Piping, valves and fittings for pressurized systems shall meet the following minimum requirements:
 - (1) All pressure transport, manifold, distribution lateral piping and fittings shall meet or exceed the requirements for Schedule 40 PVC pressure pipe as identified in ASTM Specification D1785 or other material approved by the Department.
 - (2) All pressure distribution laterals and fittings shall be adequately sized for the design flow.
 - (3) All pressure transport and manifold piping shall be adequately sized for the design flow.
 - (4) Pressure transport piping shall be uniformly supported along the trench bottom, and at the discretion of the Department, it shall be bedded in sand or other material approved by the Department;
 - (5) The ends of lateral piping shall have blow-off risers that accommodate threaded plugs or caps (see Diagram 9).

- (6) All joints in the pressure distribution manifold, lateral piping, and fittings shall be solvent welded, using the appropriate solvent for the pipe material. Pressure transport piping may be solvent welded or rubber ring jointed;
 - (7) A gate valve shall be placed on the pressure transport pipe, in or near the dosing tank, when required.
 - (8) A check valve shall be placed between the pump and the gate valve, when required. A check valve is not required if the pump has an internal check valve. All check valves and gate valves must be in an accessible and protected location for maintenance and repair.
 - (9) Caution tape that clearly states, "Caution Sewer Pipe", or other equal wording, shall be installed on the piping that conveys sewage effluent from the pump/dosing tank of a septic system to a manifold or leach field.
- (D) **Pump.** The pump shall meet the minimum design, materials, and construction standards as outlined in Section T-100.
- (E) Dosing tank design, materials and construction requirements.
- (1) Materials and construction for dosing tanks shall comply with the minimum standards in Section T-098.
 - (2) The capacity of the tank shall be sufficient to deliver the design dose and shall have a minimum capacity of 500 gallons. The liquid capacity shall be measured from the invert elevation of the inlet fitting, to the bottom of the tank.
 - (3) The second compartment of the septic tank may be utilized as a dosing tank under the following circumstances:
 - (a) The float level elevations shall be clearly identified on the plan.
 - (b) A minimum 1500-gallon septic tank will be used.
 - (c) In no event shall the liquid portion be drawn down to within 12-inches of the tee fitting or baffle slot in the common compartment wall.
 - (4) Duplex alternating pumps may be required by the Department for some installations.(e.g., large systems approved for commercial facilities or community systems).
 - (5) The dose volume shall be calculated using the following minimum and maximum dosing range formulas:
 $V_{min} = V_s + 5V_l$
 $V_{max} = V_s + 10V_l$
Where:
 V_{min} = Minimum volume of dose
 V_{max} = Maximum volume of dose
 V_s = Volume of supply line, V_s may be reduced by portions of the supply line which remain charged between pump cycles by check valves.
 V_l = Total volume of lateral lines

- (F) Disposal trench design, materials, and construction requirements:
- (1) Disposal trenches shall be constructed using the specifications for the standard disposal trench (Section T-052), except for the following:
 - (a) Pressure lateral piping shall have a minimum six (6) inches of filter material below, and not less than one inch of filter material above the piping; and
 - (b) Depth: minimum 12 inches
 - (c) Bottom width: maximum 36 inches
 - (d) Length of lateral shall be limited to that length which will result in no more than a 10% head loss over the length of the lateral.
 - (2) The top of the filter material shall be covered with filter fabric or other material approved by the Department.
 - (3) A minimum of 12 inches of backfill is required over the filter fabric within the disposal trench.
 - (4) Inspection and blow-off risers constructed in accordance with Diagram 9 shall be placed at the end of the pressure distribution lateral within the disposal trench.
 - (5) All orifices of pressure distribution laterals that face upward shall be covered with orifice shields to prevent soil washout.
- (4) **Hydraulic design criteria.**
- (A) There shall be a minimum two (2) feet head at the orifice furthest from the manifold and no more than ten (10) percent head variation within a disposal trench.
 - (B) Lateral piping shall have discharge orifices drilled upward or downward, a minimum diameter of one-eighth (1/8) inch, and evenly spaced at a distance not greater than two (2) feet in coarse-textured soils or greater than six (6) feet in finer-textured soils.
 - (C) The effect of back drainage of the total volume of effluent within the pressure distribution system shall be evaluated for its impact upon the dosing tank and system operation.
- (5) **Installation requirements.** Unless otherwise indicated on the permit or elsewhere in this Section, the installation standards of Section T-052 shall apply, and:
- (A) The pressure distribution lateral laid within the center of the trench above the gravel shall be level to within two (2) inches in one hundred (100) feet;
 - (B) Small earth berms may be required at specific intervals on trench bottoms at the discretion of the Department and design Qualified Professional;
 - (C) Each dosing tank shall be installed on a stable level base;
 - (D) Each dosing tank shall be provided with a watertight riser extending to the ground surface or above, with a minimum inside horizontal measurement equal to or greater than the tank access manhole. The watertight riser

- shall meet the materials and construction provisions of Section T-092 (3); and
- (E) Dosing tanks located in high groundwater areas shall be weighted or provided with an anti-buoyancy device to prevent flotation.
- (6) **Sloping site requirements.**
- (A) Flow restrictors shall be installed on each pressure distribution lateral to facilitate regulation of flow within each lateral.
- (B) Where the disposal field is located downslope from the pump, an anti-siphon valve on the supply line to the trenches shall be installed in the dosing tank, above the high liquid level.
- (C) Where the disposal field is located downslope a Mechanical Activation Dosing System may be permitted?
- (7) **Required inspections.** Required inspections and issuance of a Certificate of Satisfactory Completion shall be in conformance with Section T-052 (14), and include the following:
- (A) Inspection of the dosing system components, e.g., the location of the pump, screen, switches, alarms, and valves; and
- (B) Inspection of the pressure distribution system and verification of hydraulic head over the pressure distribution laterals (AKA, "squirt test"). Water and electricity must be available for this inspection. If this inspection is performed utilizing a temporary power supply (such as a generator), a final inspection conducted by either the Qualified Professional or the department shall be made after connection to the permanent power supply, to verify the design head over the distribution system.

<u>T-060:</u> PUMP SYSTEM REQUIREMENTS

(see Diagram 13)

- (1) **General statement.** A pump system is utilized to enable the installation of a disposal field upslope of the structure to be served. The effluent is not distributed to the disposal field under pressure, but by gravity flow following pumping to a higher elevation.
- (2) **Criteria for approval.** The criteria for approval as outlined in Section T-052 shall be met.
- (3) **Criteria for system sizing.** System sizing shall meet the provisions of Section T-052 (4) and (7).
- (4) **Pump requirements.** The pump shall meet the minimum design, materials, and construction specifications in Section T-100. Additionally, pumps shall meet total head requirements of the site encompassing elevation head, friction head, and pressure head.

- (5) **Pump tank requirements.**
- (A) The pump tank shall have capacity sufficient to deliver the design dose and have a minimum capacity of 500 gallons.
 - (B) The high water alarm shall activate immediately when the liquid level exceeds the normal elevation for the "on float" by six (6) inches.
 - (C) Each tank shall be installed on a stable level base.
 - (D) Construction of the tank shall comply with the standards in Section T-098.
 - (E) Each pump tank shall be provided with a watertight riser extending to the ground surface or above, with a minimum inside horizontal measurement equal to or greater than the tank access manhole. Provision shall be made for securely fastening the manhole cover.
 - (F) Pump tanks in high groundwater areas shall be weighted or provided with an anti-buoyancy device to prevent flotation.
- (6) **Installation requirements.** Unless otherwise indicated on the permit, installation requirements shall be as specified in Section T-052 and Section T-058 (5) (with application as a pump tank, not dosing tank).
- (7) **Required inspections.** Inspection and issuance of the Certificate of Satisfactory Completion shall be in conformance with Section T-052 (14). Additionally, an inspection of the system components and pump function may be made.

<i>T-062: DEEP TRENCH SYSTEM REQUIREMENTS</i>
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- (1) **General statement.** A deep trench system is a system with disposal trenches greater than thirty (30) inches deep. Trench depth must be kept as shallow as possible to take advantage of those soil horizons that best provide oxygen and promote microbiological activity.
- (2) **Criteria for approval.** A deep trench system will only be permitted under the following conditions:
- (A) A lot or parcel is inadequate to accommodate a standard system for the development proposed, and/or
 - (B) There are greater than 48-inches of effective soil depth below the bottom of the disposal trench in the disposal field and replacement area.
- (3) **Design criteria.**
- (A) Unless otherwise approved by the Department the disposal trench shall have a minimum depth of thirty-one (31) inches, and a maximum width of thirty-six (36) inches.
 - (B) The deep trench system absorption area and septic tank liquid capacity required shall be calculated using the standard system criteria for system sizing in Section T-052 (4) and (7). For calculating lineal feet, the sidewall area (extending the entire gravel depth) shall be used.

- (C) The minimum disposal trench spacing (sidewall-to-sidewall) within a disposal field shall be four (4) feet or two (2) times the depth of the filter material, whichever is greater.
- (D) If pressure distribution is used the application rate shall be as follows:
 - $3.5/\sqrt{t}$ if sidewall area is to be considered
 - $5/\sqrt{t}$ for considering trench bottom area only
- (4) **Installation requirements.** Unless otherwise indicated on the permit, or elsewhere in this Section, installation requirements shall be the same as for a standard system (Section T-052).
- (5) **Required inspections.** Inspections and issuance of a Certificate of Satisfactory Completion shall be in conformance with Section T-052 (14).

<u>T-064:</u> <i>STEEP SLOPE SYSTEM REQUIREMENTS</i>
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- (1) **General statement.** A steep slope system is a system installed on sites with slopes greater than thirty (30) percent, only when allowed through approval of a variance.
- (2) **Criteria for approval.** A steep slope system shall meet the following requirements:
 - (A) Steep slope systems for existing parcels may only be developed in conformance with the county General Plan, zoning restrictions, recorded restrictions and notes on the subdivision or parcel map, and any other applicable county requirements. As noted a variance application, pursuant to Section A-030 of the Administrative regulations is required to utilize a slope exceeding 30%. Steep slope systems are not permitted for creating lots and parcels.
 - (B) The vertical separation between a limiting layer, fractured bedrock, or groundwater which runs parallel with the ground surface slope shall be measured from the upslope side of the disposal trench bottom, and is to be consistent with the system-type (i.e.: 'gravity', 'pressure distribution', or 'supplemental treatment') proposed for the tested site.
- (3) **Soil Stability Report.** The Department will require a geological or geotechnical report by a registered Civil Engineer or Certified Engineering Geologist (with background in soil mechanics) where the slope exceeds - 40%, or where there are indications of soil instability. The report shall discuss soil stability within the proposed disposal area and replacement area of the system and on the soil stability with respect to the building foundation, surrounding terrain and adjacent properties. The report shall include, at a minimum:
 - (A) A site plan drawn to scale, showing topography, locations of the proposed house, driveway or other structures;
 - (B) Soil profile information as it relates to soil stability;

- (C) Discussion of the presence of groundwater, its seasonal variation (if any) and influence on the soil stability after disposal field construction;
 - (D) Statement concerning the stability of the soil and bedrock that may specifically include an evaluation of soil creep and landslide potential at the disposal area and replacement area location and surrounding terrain;
 - (E) Recommendation for interceptor drains (if needed) that may render soil stable and prevent flooding of the disposal area and replacement area;
 - (F) Recommendation of the best structure-driveway-disposal field location relationship as it relates to soil stability; and
 - (G) Recommendation of installation methods and procedures.
- (4) **Installation requirements.**
- (A) Unless otherwise indicated on the permit, or in this section, installation requirements shall be the same as for a standard system (Section T-052).
 - (B) Trenches shall be installed with a minimum of 12 inches of native soil cover as measured from the downhill side of the trench.
- (5) **Required inspections.** Inspections and issuance of a Certificate of Satisfactory Completion shall be in conformance with Section T-052 (14).

<u>T-066:</u> <i>INTERMITTENT AND RECIRCULATING SAND FILTER SYSTEM REQUIREMENTS</i>

- (1) **General statement.** An intermittent sand filter system consists of a septic tank, dosing tank, sand filter bed and a disposal field. Effluent from a structure is periodically dosed to a bed of sand media, bacteriologically treated, and discharged into a disposal field via an underdrain. This system may be a special design for some sites to mitigate the limitations associated with shallow effective soil depth, soils with rapid permeability and very slowly permeable soils.
- (2) **Criteria for approval.** An intermittent sand filter system shall meet the following requirements:
- (A) Sand filter systems may be installed in Soil Groups A, B, C, D, and E (as identified in Section T-052 (4), or percolation rates of 1-240 minutes per inch.
 - (B) The proposed disposal area and replacement area shall demonstrate a minimum of two (2) feet of effective soil depth beneath the disposal trench bottom.
 - (C) Unless otherwise approved, a sand filter system shall only be considered for use for a single family dwelling; and
 - (D) Meet additional requirements prescribed by the January 1996 version of the Placer County Sand Filter Guidelines and Specifications, and subsequent modifications, as ratified or adopted by the Nevada County Board of Supervisors. In the case of a conflict between requirements of

the Nevada County ordinance/regulations and the Placer County Sand Filter Guidelines and Specifications, the Nevada County ordinance/regulations shall take precedence.

- (E) System monitoring and maintenance requirements in conformance with the Monitoring and Maintenance Section A-026.
- (3) **Required inspections.** Inspections and issuance of a Certificate of Satisfactory Completion shall be in conformance with Section T-052 (14).
- (4) **A recirculating sand filter** may be considered on a case-by-case basis utilizing nationally recognized standards as the basis for approval.

<u>T-068:</u> <i>MOUND SYSTEM REQUIREMENTS</i>
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- (1) **General statement.** A mound system is an aboveground or at-grade absorption facility – in the supplemental treatment system-type category - useful in addressing shallow effective soil depth. Similar to other supplemental treatment systems minimum vertical separation from groundwater is required to be 2 feet. The mound system consists of a distribution network that under pressure evenly delivers effluent from a septic tank to a "mounded" bed of filter material over sand media.
- (2) **Criteria for approval.** The mound design and system shall meet the minimum requirements of the Department and the provisions of the State Water Resources Control Board, Guidelines for Mound Systems, most current version, and amendments thereto. The following provisions shall supersede any conflicting provisions of the Guidelines for Mound Systems that shall be met:
 - (A) An application rate no greater than 0.6 gallons per day per square foot (gpd/ft²) shall be used for calculating the mound sand bed area.
 - (B) Sand media as described in the January 1996 version of the Placer County Sand Filter Guidelines and Specifications, and subsequent modifications, as ratified or adopted by the Nevada County Board of Supervisors, shall be used for the sand bed.
 - (C) Gravel as identified in the Guideline shall be known as filter material, as defined in Section T-066 of these regulations.
 - (D) Unless otherwise approved, a mound system shall only be considered for use for a single-family dwelling.
 - (E) System monitoring and maintenance requirements in conformance with the Monitoring and Maintenance Section A-026.
- (3) **Required inspections.** Inspections and issuance of a Certificate of Satisfactory Completion shall be in conformance with Section T-052 (14).

T-072: HOLDING TANK REQUIREMENTS

- (1) **General statement.** A holding tank is a watertight container designed to receive and store sewage for disposal at another location.
- (2) **Criteria for approval.** A permit shall be issued for a holding tank on sites that meet all of the following conditions:
 - (A) The site cannot be approved for the installation of a standard system or special design system;
 - (B) No community or area-wide public sewer system is legally and physically available as defined in Section A-018 (1)(E);
 - (C) The tank is intended to serve a small industrial or commercial building, or an occasional event such as a county fair or a rodeo;
 - (D) Unless otherwise approved by the Department, the projected daily sewage flow is not more than two hundred (200) gallons;
 - (E) The setback requirements outlined in Table 1 (contained in Section T-112) for a septic tank can be met;
 - (F) The owner of the property shall record a deed restriction agreeing to be served by public sewer system if at any time a connection becomes legally available within three hundred (300) feet of the property; and
 - (G) The owner shall provide the Department with:
 - (1) A copy of a contract with a County licensed septage hauler that shows the tank shall be pumped at regular intervals or as needed to prevent use of greater than seventy-five (75) percent of the tank's capacity. The contents of the tank shall be disposed of at an approved septage receiving facility, in an approved manner; and
 - (2) A record of pumping dates and amounts pumped shall be maintained by the property owner and made available to the Department upon request.
- (3) **General requirements.**
 - (A) A holding tank does not have to be designed and installed under the inspection and approval of a Qualified Professional.
 - (B) No building may be served by more than one (1) holding tank.
 - (C) A single parcel or lot of record may be served by no more than one (1) holding tank.
 - (D) Each tank shall have a minimum liquid capacity of fifteen hundred (1,500) gallons and conform with T-092.
 - (E) Holding tanks shall not be used as a method for sewage disposal for creating lots and parcels.
- (4) **Permit requirement.** A Public Health Certificate of Operation shall be obtained prior to the final approval of the permit, accompanied by the appropriate filing fee,

and contain all exhibits required by the Department.

- (5) **Installation, construction and monitoring requirements.** All installations shall meet the following:
- (A) Be located and designed to facilitate visual inspection and removal of contents by pumping;
 - (B) Be equipped with both an audible and visual alarm, placed in a location acceptable to the Department, to indicate when the tank is seventy-five (75) percent full. The audible alarm only may be user cancelable; and
 - (C) Have no overflow vent at an elevation lower than the overflow level of the lowest fixture served.
 - (D) The holding tank construction and installation shall comply with the requirements specified in Section T-060 (5) and (6).
- (6) **Inspections required.** Each holding tank installed under this section, shall be inspected annually. A fee shall be charged.

T-074: VAULT PRIVY REQUIREMENTS

- (1) **General statement.** A vault privy is a structure used for disposal of human waste without the aid of water. It consists of a shelter built above a subsurface vault into which human waste falls. The vault privy has no water connection.
- (2) **Criteria for approval.** Vault privies may be allowed for temporary or limited use areas, where primitive type picnic grounds, campsites, camps and recreation areas are to be maintained, when a septic tank and leachfield are not practicable as determined by the Department. The separation distances specified in Table 1 (contained in Section T-112) shall be met. Vault privies shall not be used for seasonal dwellings, commercial facilities, or single family dwellings.

As a condition of approval, monitoring to ensure protection of water quality may be required. A construction permit shall be obtained for a vault privy as required by this Chapter.

- (3) **Materials and construction requirements.** Vault privy (shelters and facilities) shall be constructed in accordance with the minimum requirements contained in Section T-106.
- (4) **Maintenance requirement.** Vault privies shall be maintained to prevent health hazards and pollution of public waters. The privy vault shall not be allowed to become filled with excreta to a point within two (2) feet of the ground surface. The excreta in the vault shall be pumped out by a licensed septage pumper as necessary to fulfill these requirements. The property owner or septage pumper shall submit the septage pumper's receipt to the Department within thirty (30) days of its pumping. The privy shall be maintained in a sanitary condition and in

good repair.

- (5) **General requirement.** No water-carried sewage shall be placed in vault privies. Contents of vault privies shall not be discharged into storm sewers, on the surface of the ground or into public waters.

T-078: PORTABLE TOILET REQUIREMENTS

- (1) **General statement.** A portable toilet is any self-contained chemical toilet facility that is housed within a portable toilet shelter. The portable toilet has no direct water connection.
- (2) **Criteria for approval.** Portable toilets may be approved for temporary or limited use areas, such as construction sites (for use by on-site employees), recreation parks, camp sites, and special events, provided that the separation distances in Table 1 (for septic tanks) can be met. Portable toilets shall not be allowed for seasonal dwellings, commercial facilities or single family dwellings.
- (3) **Materials and construction requirements.** Portable toilet (shelters and facilities) shall be constructed in accordance with the minimum requirements contained in Section T-106.
- (4) **Maintenance requirement.** Portable toilets shall be maintained to prevent health hazards and pollution of public waters.
- (5) **General requirement.** No water-carried sewage shall be placed in portable toilets. Contents of portable toilets shall not be discharged into storm sewers, on the surface of the ground or into public waters.

T-080: WATERLESS TOILET REQUIREMENTS

Waterless toilets must meet the requirements of the Nevada County Land Use and Development Code Chapter L-VI, Article 5.

T-082: GRAYWATER SYSTEM REQUIREMENTS

Graywater systems shall be designed, constructed and installed in accordance with the most current California Graywater Standards adopted by the State of California.

T-088: SUPPLEMENTAL TREATMENT SYSTEM REQUIREMENTS

- (1) **General Statement.** Supplemental Treatment System is any On-Site Wastewater Treatment Systems (OWTS) or component of an OWTS, except a septic tank or dosing tank, which performs additional wastewater treatment prior to discharge of effluent. Supplemental treatment may be required where the site is not suitable for a conventional system.

This type of system is a special design to mitigate the limitations associated with shallow effective soil depth, soils with rapid permeability or very slow permeability soils. The SDTAG shall review all proposed supplemental systems and make recommendations to the department.

- (2) **Criteria for Approval.** Unless otherwise approved by the Department, the Supplemental Treatment System shall conform with the following requirements:
- (A) Produce effluent that successfully meets the performance requirements established by ANSI/NSF Standard-40 for EPA Class I effluent.
 - (B) All supplemental treatment systems must meet or exceed American National Standards Institute/ National Sanitation Foundation Standard-40 (ANSI/NSF-40), or equivalent.
 - (C) Approved components may not be used independently. System components may be used as part of the overall wastewater treatment system as tested and approved by ANSI/NSF.
 - (D) Only persons authorized by the supplemental treatment system manufacture may install a supplemental treatment system. All supplemental treatment systems must be designed by certified designers and installed by certified installers. Specific training must be offered to all interested parties for the installation, monitoring, and maintenance of the type of system utilized. Proof of the specified training by way of certification or letter from an approved trainer is required.
 - (E) Supplemental treatment systems must be equipped with telemetric alarms that notify the owner and the Certified System Service Provider (CSSP) in the event of system malfunction, if applicable.
 - (F) All owners of supplemental treatment systems must maintain current Operating Permits and be inspected and monitored by Certified System Service Provider (CSSP) at a frequency recommended by the manufacturer not to exceed two (2) years.
 - (G) Manufacturers of supplemental systems must provide homeowners with Operation and Maintenance Manuals.
 - (H) Unless specified, Supplemental Treatment Systems may be installed in **Soil Groups A, B, C, D, and E (as identified in Section T-052 (4)), with percolation rates of 1-240 minutes per inch.
 - (I) The proposed disposal area and replacement area shall demonstrate a minimum of two (2) feet of effective soil depth beneath the disposal trench bottom.

- (3) **Required inspections.** Inspections and issuance of a Certificate of Satisfactory Completion shall be in conformance with Section T-052 (14). Unless specifically waived, the following Environmental Health inspections are required:
- (A) Preconstruction meeting including layout including the designer, installer and Environmental Health Staff.
 - (B) Water tight testing of all components prior to backfill.
 - (C) Squirt/flow test of unit, if applicable.
 - (D) Squirt/flow test of pressure dosed and/or drip tubing disposal systems, if applicable.
 - (E) Entire system prior to cover.
 - (F) CSSP and designer for system start up prior to designer certification.
 - (G) Final cover and erosion control.
 - (H) Any other inspection as listed on the permit.
 - (I) The above inspections may be combined.
- (4) **Maintenance and Monitoring**
- (A) System monitoring and maintenance in conformance with Section A-026
 - (B) Manufacturers of proprietary systems must provide a list of Certified System Service Providers to the Department on annual basis.
 - (C) All supplemental treatment systems shall be continuously monitored by integrated telemetry, if applicable.
 - (D) All supplemental treatment systems must be maintained and monitored by a CSSP at all times for the life of the system.
 - (E) Property owners shall maintain an annual operating permit with Environmental Health.
 - (F) As part of the supplemental treatment system approval process, the Manufacturer shall be required to provide the Department with system Maintenance and Monitoring procedures.

<u>T-089:</u> AT-GRADE SYSTEMS

- (1) **General Statement.** An At-Grade system combines a treatment component and pressure distribution to a sewage absorption area (leach field/bed) constructed directly on the ground surface. This type of system shall conform to the 'Wisconsin At-Grade Absorption System Siting Design & Construction Manual' by James C Converse, E Jerry Tyler and James O. Peterson (Manual) dated 1990, and At-Grade Systems for On-Site Wastewater Treatment and Dispersal' by James Converse dated January, 1999.
- (2) **Soils Testing.** Site testing shall be conducted during defined "Wet Weather Test" (WWT) periods. A minimum of 4 mantles and 6 percolation tests will be required. Pre-soaking for percolation tests shall be for a minimum of a 48 hour period. Auto siphon percolation tests equipment is highly recommended. The percolation test holes shall be located throughout the proposed leachfield/bed area. The percolation tests test holes depths shall be located in the most restrictive soil horizon, within 2 feet below the bottom of the system. Test Qualified Professional shall notify the department of scheduled percolation testing.

- (A) Site Evaluation Report** for this type system should address:
- (1)** The expected horizontal and/or vertical movement of effluent through the soil profile.
 - (2)** Describe the topographical position of the proposed sewage disposal area with respect to the type of slope and system layout.
 - (3)** Evaluate for soil banding, especially in sand textured soils.
 - (4)** Evaluate profile for layers that may restrict effluent flow, and determine the limiting conditions such as bedrock, high groundwater level, soil permeability and texture with respect to the soils ability to treat effluent.
 - (5)** Estimate and discuss the permeability & effectiveness of EACH soil horizon to a minimum of 30 inches below the system or to the limiting soil horizon. The discussion of each horizon should include the soil morphology (texture, structure & consistence) and verifying the permeability of each horizon with a percolation test. Because of the potential for variability of soil horizon depths the designer and/or Qualified Professional should also verify and state that there 'measured percolation zone', and rate is located in the specific horizon(s) that are described.
 - (6)** The final design soil loading rate shall be discussed and recommended in the SER. This rate should be determined by the most limiting horizon beneath the bottom of the system up to a distance of 30 inches. If needed, this rate should be adjusted using a Long Term Acceptance Rate (LTAR) or other site or soil constraints.
 - (7)** If a seasonal or year round groundwater table, and/or redoxymorphic conditions are present within 24 inches below the bottom of the system, then a ground water mounding analysis is recommended.
- (3) Criteria for Approval**
- (A)** At-Grade Designs shall be restricted to sites that have percolation test averages between 1-120mpi only.
 - (B)** A maximum slope of ten percent (10%) will be permitted.
 - (C)** Design shall use maximum application rates of 0.8.
- (4) Construction:**
- (A)** Installation of the At-Grade System shall only be by a licensed contractor holding one of the following licenses: A, B, C36 or C42.
 - (B)** Only installers that are approved may prepare and install an At-Grade System.
 - (C)** Systems shall only be constructed during the dry season and only with the design Qualified Professional's approval following a pre-construction site meeting. Construction is prohibited from October 15 – April 15 and during Wet Weather Test.

- (D) The surface soil shall be tilled, as described in the Manual, to a maximum depth not to exceed six (6) inches.
- (E) The contractor shall submit a sieve analysis of the final cover to the Department. The final cover shall be loamy-sand to sandy-loam. The design Qualified Professional must inspect and approve the cover material prior to placement.
- (F) The design Qualified Professional shall provide the contractor with a construction schedule (order of events).

<u>T-090:</u> <i>DRIP DISPERSAL SYSTEMS (DDS)</i>
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- (1) **General Statement.** A Drip Dispersal system combines a treatment component with a pressurized network of approved flexible tubing, with in-line emitters, placed at a shallow elevation below soil grade.
- (2) **Site Criteria**
 - (A) Vertical Setbacks: Minimum depth to seasonal high ground water, bedrock or an impermeable soil layer shall be 2 feet below the dripline depth. Percolation rates for subsurface drip dispersal systems shall be within the range of 1 to 240 minutes per inch (MPI), as determined by testing the percolation rate of the most restrictive soil horizon within 24- inches of the proposed drip line depth.
- (3) **Design.** Minimum absorption area, and system layout shall be calculated using expected use and flows, together with the estimated infiltration rate into the soil.
 - (A) Drip systems to be installed on slopes less than 20 percent may use non-pressure compensating drip emitters with pressure regulators.
 - (B) Drip systems on slopes between 20 percent and 30 percent shall use pressure compensating tubing only. Drip systems have uniform timed dosing of effluent, and provide an adequate dose volume to pressurize each zone.
 - (C) Design Qualified Professional shall submit a completed copy of worksheet (manufacturer-standardized) for the dripline design.
 - (D) Design (report) shall include specific installation instructions, including the following:
 - (1) Material specifications
 - (2) Construction Methods: include detailed instructions for site/soil preparation & installation.
 - (3) An inspection schedule listing critical control points.
 - (4) Control panel programming.
 - (5) Component testing: Identify components to be tested and methods to be used.
 - (6) Final grading/landscaping requirements

(Construction: Installation of the DDS shall only be by a Licensed Contractor holding one of the following licenses: A, B, C36 or C42).

(4) Materials/Components

- (A)** Filters, disk or vortex screen type (as recommended, and warranted by manufacturers) shall be specified design Qualified Professional, and sized to operate at a flow rate at least equal to the maximum design discharge rate of the system, including backwash of filter – at minimum specific velocity 0.5 ft/sec (Filters must be accessible for inspection and servicing.)
- (B)** Air/Vacuum Relief Valve(s) shall be installed at the high point of each zone of distribution, and in a protected and accessible manner (above-grade, in a valve box).
- (C)** Supply and return manifolds shall be configured efficiently, to distribute effluent to dripline, and collect return flow, and filter backwash and debris back to treatment unit.
- (D)** Flow meters (recommended), or other means to monitor flow on return and supply line, at accessible locations for reading and servicing (all flow monitoring devices to be designed for use with wastewater).
- (E)** Controller capable of timed dosing is required for all systems.
- (F)** Approved Drip Dispersal tubing incorporates USDA-approved “root growth inhibitor” – during manufacturing – which prevents root intrusion into emitters.
- (G)** Valves must be readily accessible for inspection and/or service (such as in a valve box with access to grade).
- (H)** A ground cover (turf or other appropriate landscaping) must be planted over the dripfield after installation to prevent erosion of the dripfield area.

(5) Dripline Placement

- (A)** Drip tubing is to be designed and installed as level as possible, parallel to contours on sloped sites, and with prevention of surface drainage along driplines or manifolds. Designers must specify the filter that is recommended by the manufacturer of the dripline.
- (B)** Minimum installation is 6 inches below grade in undisturbed soil. Ideal placement of emitter tubing shall be at 2-foot centers, with 2-foot emitter spacing yielding an emitter within a ~4 sq. ft. area.
- (C)** Maximum length of each run of dripline must be in accordance with manufacturer’s specifications to insure equal distribution.

(6) Dripline

- (A)** Must be installed as level as possible and parallel to contours on sloped sites.

- (B) Minimum installation depth is 6 inches beneath grade (in moderate climates). Where frost is a concern, recommended minimum installed depth is 8 to 10 inches. Dripline must be installed in original, undisturbed soil.
 - (C) Unless there are special circumstances identified at time of the OSSE and application, emitter tubing shall be placed on 2-foot centers with 2-foot emitter spacing so that each emitter supplies a 4 sq. ft. area.
 - (D) Maximum length of each run of dripline must be in accordance with manufacturer's specifications to insure equal distribution.
 - (E) DDS must be designed and installed to prevent low-level drainage of effluent along dripline or manifolds.
- (7) **FLUSHING**
- (A) All DDS must include means to backwash filters and flush drip line/manifolds with minimum velocities at 0.5 ft/sec or greater.
 - (B) Automated or manual filter backwash and dripline flushing is required for all drip systems.
 - (C) Filter backwash / line flush debris must be returned to processing septic tank.
- (8) **INSTALLATION.** Design of DDS must include specific installation instructions including the following:
- (A) Material specifications
 - (B) Construction Methods: include detailed instructions for site/soil preparation & installation.
 - (C) An inspection schedule listing critical control points.
 - (D) Control panel programming.
 - (E) Component testing: Identify components to be tested & methods to be used.
 - (F) Construction: Installation of the DDS shall only be by a Licensed Contractor holding one of the following licenses: A, B, C36 or C42.
 - (G) Final grading/landscaping requirements

<u>T-091:</u> <i>LARGE SYSTEM REQUIREMENTS</i>
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- (1) **General statement.** A large system is a system with a projected daily sewage flow of two thousand five hundred (2,500) gallons and not to exceed ten thousand (10,000) gallons, from one residential or commercial facility.
- (2) **Permit application procedures.** Application shall be made to the Department on forms provided by the Department. Each application must be completed in full, signed by the applicant, and accompanied by the following:

- (A) The appropriate filing fee;
 - (B) A narrative describing the details of the proposed project;
 - (C) A site approval report;
 - (D) A construction/design plan prepared by a Qualified Professional. Requirements of Section T-054 shall apply to large system plans;
 - (E) A written assessment of the impact of the proposed system upon the quality of public waters and public health, (a groundwater mounding analysis and/or a nitrate study).
- (3) **Special design requirements.** Unless otherwise authorized by the Department, designs for large systems shall at a minimum meet all of the following:
- (A) Large systems shall be designed utilizing a pressurized distribution system in accordance with Section T-058;
 - (B) The disposal fields shall be divided into relatively small, approximately equal sized units which are dosed alternately;
 - (C) Effluent distribution shall alternate between the disposal area units;
 - (D) The system shall have at least two (2) alternating pumps;
 - (E) Unless otherwise specified, septic tank design, materials, and construction shall conform to the provisions of Section T-092. The Department shall review proposed tank designs and may impose certain standards to carry out the purposes of these regulations; and
 - (F) The project shall comply with all other agency requirements.
- (4) **Installation requirements.** Construction shall be in conformance with the permit.
- (5) **Inspection requirements.** Unless otherwise indicated, inspections and issuance of a Certificate of Satisfactory Completion shall be in conformance with Section T-052 (14).

<u>T-092:</u> SEPTIC TANK MATERIALS AND CONSTRUCTION
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- (1) **General statement.** The requirements of this section shall apply to all septic tanks manufactured for use in Nevada County unless otherwise indicated in these regulations.
- (2) **Materials.** Septic tanks shall be precast reinforced concrete or other material approved by the Department. Wood tanks and metal tanks are prohibited.
Note: Fiberglass septic tanks and other department approved materials may be considered on a case-by-case basis. These septic tank designs shall be reviewed by the Department, and may require a permit from the Building Department.
- (3) **Tank construction/design specifications.**
- (A) Precast concrete tanks shall have a minimum wall, compartment and bottom thickness of two and one-half (2-1/2) inches, and shall be adequately reinforced. The top shall be at least four (4) inches thick.

- (B) Septic tanks shall have a minimum of two compartments. Installation of multiple single compartment tanks in a series is not acceptable, unless approved by Department prior to installation. The first compartment shall have a liquid capacity of two-thirds (2/3) of the total required liquid capacity, as measured from the invert of the outlet fitting.
- (C) Each compartment shall have access provided by a manhole having not less than eighteen (18) inches across its shortest dimension unless otherwise approved by the Department.
- (D) Each compartment shall be provided with a concrete (or other material approved by the Department) watertight riser, extending to the ground surface or above, with a minimum inside horizontal measurement equal to or greater than the access manhole. Inlet and outlet pipes shall pass through a cast-in-place rubber boot unless alternate design is provided by designer. All joints shall be properly sealed with a sealant and/or an interlocking mechanism approved by the Department. Cement grout sealing alone is not an acceptable method of sealing joints. Surface water shall be diverted away from the riser cover by creating a sloping surface away from the riser, The cover shall be securely fastened with stainless steel or other corrosion resistant fasteners to make the riser vandal, tamper, and child resistant. No cover shall exceed seventy-five (75) pounds.
- (E) No riser shall have an inside horizontal dimension of less than twenty-four (24) inches. The liquid depth of any compartment shall be at least thirty (30) inches. Liquid depths greater than seventy-two (72) inches shall not be considered in determining the working liquid capacity.
- (F) Septic tanks shall be watertight. They shall be built such that any construction joints will be above the effluent level. Tanks with construction joints below the effluent level will require a field inspection to verify that they are watertight.
- (G) Septic tanks shall be capable of supporting an earth load of at least three hundred (300) pounds per square foot when the maximum coverage does not exceed three (3) feet. Tanks installed with more than three (3) feet of cover shall be reinforced to support the additional load. Tanks, risers, and riser covers installed beneath paved surfaces subject to vehicular traffic (e.g., driveways and vehicle turnarounds) shall be engineered to support the additional load.
- (H) At least ten (10) percent of the inside volume of the tank shall be above liquid level to provide scum storage.
- (I) A corrosion-resistant effluent filter approved by the Department shall be provided in the outlet tee.
- (J) **Watertight Testing.**
 - (1) Nevada County On-Site Sewage Disposal Regulations, Section T-092, requires septic tanks with construction joints below the tank liquid level to be field-verified watertight.
 - (a) Watertight testing must be done on septic tanks with construction joints below the tank liquid level using the

following methods:

Water Fill Test

1. Tank is installed on a six-inch layer of sand or $\frac{3}{4}$ inch minus aggregate.
2. All sides of the tank shall be visible for inspection by the County Inspector or Qualified Professional.
3. The tank shall be filled the day prior to the test so that the water level is 1 inch above the riser / tank joint.
4. Water level equalization may take 24 hours. After the equalization, start one-hour test.

NOTE: Water Fill Test passes if, "no appreciable drop in level" is observed.

- (2) Nevada County On-Site Sewage Disposal Regulations, Section T-112, requires septic tanks to pass a watertight test for installations 50-100 feet from a well, surface water or canal.

Vacuum Test

1. Tank is installed on a six-inch layer of sand of $\frac{3}{4}$ inch minus aggregate.
2. All sides of the tank shall be visible for inspection.
3. A licensed contractor may perform a vacuum test on appropriate tanks and provide written certification.

NOTE: Vacuum test passes when three inches of mercury is held constant for three minutes with no drop.

(4) **Size.**

- (A) Septic tank size shall be determined in accordance with Section T-052 (7) for single family dwellings or Section T-054 for commercial facilities.
- (B) The liquid depth of any compartment shall be at least thirty (30) inches. Liquid depths greater than seventy-two (72) inches shall not be considered in determining the working liquid capacity.

(5) **Fittings.**

- (A) The inlet and outlet fittings shall be of Schedule 40 PVC, SDR-35, Schedule 40 ABS, or other materials approved by the Department, with a minimum diameter of three (3) inches.
- (B) The distance between the inlet and outlet fittings shall be equal to, or greater than, the liquid depth of the tank.
- (C) All fittings shall be secured with a sealant approved by the Department and shall be constructed so as to be watertight. Tank fitting locations shall be properly engineered to ensure the structural integrity of the tank.
- (D) The inlet fitting shall be a "sanitary tee" with minimum pipe diameter no less than the connecting building sewer no less than three (3) inches. It shall extend at least four (4) inches above and twelve (12) inches below the liquid level.
- (E) The outlet fitting shall be a "sanitary tee" with minimum pipe diameter no less than the connecting effluent sewer pipe nor less than four (4) inches in order to accommodate an effluent filter. The outlet fitting shall extend at

least four (4) inches above liquid level, and below liquid level a distance approximately equal to the flow level through the baffle. The diameter of the vertical leg extending below the liquid level shall not be less in size than the building sewer nor less than four (4) inches.

- (F) An effluent filter is required prior to discharge of the effluent to the effluent sewer. It shall be commercially designed and manufactured, intended for effluent filtration, and be readily accessible for inspection and cleaning.
 - (G) The invert of the inlet fitting shall not be less than one (1) inch and preferably three (3) inches above the invert of the outlet fitting.
 - (H) Sanitary tees shall be accessible through the manhole access riser.
- (6) **Baffle.** A minimum three (3) inch diameter "tee" fitting or baffle slot (with the same opening area as the fitting) shall be placed in the common compartment (baffle) wall, using the same materials specifications as required for the outlet fitting. The invert of the "tee" fitting or baffle slot shall be located approximately at fifty (50) percent of the liquid depth. There shall be a minimum two-inch vent opening in the baffle above the liquid level. The baffle shall be constructed of the same material as the tank and extend a minimum of four (4) inches above the liquid level.
- (7) **Markings.** All septic tanks shall be marked on the uppermost tank surface with the liquid capacity of the tank and the manufacturers business name.
- (8) **Tank documentation.** For septic tanks proposed for use in Nevada County, or when a revised tank design is proposed the commercial manufacturer of the septic tank shall provide the Department with written documentation that the septic tank design, materials and construction comply with all requirements of these regulations. The manufacturer shall provide a set of plans and specifications prepared by a California registered professional engineer, for each tank design and a set reflecting any subsequent revisions. Plans shall include at a minimum: dimensions, reinforcing, structural calculations, materials specifications and the appropriate fee. The Department may conduct periodic manufacturer's facility inspection to verify compliance with these regulations.

<u>T-094:</u>	<i>DROP BOX AND CROSSOVER UNIT MATERIALS AND CONSTRUCTION</i>
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(see Diagram 5)

- (1) **Drop Box**
- (A) Drop Boxes shall be constructed of concrete, fiberglass, or other materials acceptable to the Department.
 - (B) Drop Boxes shall be watertight, and designed to accommodate the necessary distribution laterals and expected flows. The top, walls, and bottom of concrete Drop Boxes shall be at least one and one-half (1-1/2) inches thick.

- (C) The invert elevation of the outlet and to subsequent trench shall be the same elevation as the top of the filter material in the trench.
 - (D) Each Drop Box shall be provided with a sump extending at least two (2) inches below the invert of the outlets.
 - (E) For initial use of a manufacturer's Drop Box design proposed for use in Nevada County, or when a revised box design is proposed for same, the commercial manufacturer of the prefabricated box shall provide the Department with written documentation that the box design, materials and construction comply with all requirements of these regulations.
 - (F) All Drop Boxes shall be bedded level on undisturbed soil, aggregate with a minimum of 90% compaction, or on concrete.
- (2) **Crossover Unit**
- (A) Crossover units shall meet the minimum standards established in Section T-102 (3).
 - (B) Crossover units shall be located within the disposal trench, firmly bedded in the filter material. For gravelless systems, compacted soil, gravel and/or concrete shall be used for crossover support.
 - (C) The crossover unit shall be installed so that the elevation of the overflow invert lies between the middle and top elevations of the distribution pipes.
 - (D) All joints shall be mechanically secured.

<i>T-096: DIVERSION VALVE MATERIALS AND CONSTRUCTION</i>

- (1) Diversion valves shall be constructed of durable material and be of a design approved by the Department. They shall be corrosion-resistant, watertight, and designed to accommodate the inlet and outlet pipes.
- (2) Each diversion valve shall have a positive stop.
- (3) The manufacturer's name or a number assigned by the Department shall be marked on the cover.
- (4) For initial use of a manufacturer's diversion valve design proposed for use in Nevada County, or when a revised valve design is proposed for same, the commercial manufacturer of the prefabricated valves shall provide the Department with written documentation verifying that the valve design, materials and construction comply with all requirements of these regulations.

T-098: *DOSING/PUMP TANK MATERIALS AND CONSTRUCTION*

(see Diagram 12)

- (1) Dosing tanks shall be constructed in accordance with the minimum standards of Section T-092 (2) and (3) with the exception that the access manhole for the dosing tank shall be a minimum twenty (20) inches in diameter.
- (2) Each dosing tank employing one (1) or more pumps shall have a liquid capacity sufficient to deliver the design dose, and have a minimum capacity of 500 gallons. The Department may require a larger capacity dosing tank when the projected daily sewage flow exceeds five hundred (500) gallons per day. The liquid capacity shall be as measured from the invert elevation of the inlet fitting.
- (3) Each dosing tank shall be marked on the uppermost surface with the liquid capacity and manufacturer's business name, or a number assigned by the Department.
- (4) For dosing tanks proposed for use in Nevada County, or when a revised tank design is proposed, manufacturer of the tank shall provide the Department with written documentation that the tank design, materials and construction comply with all requirements of these regulations. The manufacturer shall provide a set of plans and specifications prepared by a registered professional engineer for each tank design and a set reflecting any subsequent revisions. The appropriate fee shall accompany plans.

T-100: *EFFLUENT PUMP, CONTROL, AND ALARM MATERIALS AND CONSTRUCTION*

(see Diagram 12)

- (1) **General statement.** Unless otherwise specified, effluent pump, control box, and alarm materials and construction shall at minimum be in conformance with this section.
- (2) **Pumps, Controls, and Alarms.** Electrical components used in systems shall comply with the California Electrical Code, and the following provisions:
 - (A) Motors shall be continuous-duty, with overload protection.
 - (B) Pumps shall have durable impellers of bronze, cast iron, or other materials approved by the Department.
 - (C) Submersible pumps shall be provided with an easy, readily accessible means of electrical and plumbing disconnect, and a non-corrosive lifting device as a means of removal for servicing.
 - (D) For pressure distribution systems, a corrosion-resistant screen shall protect the pump. The screen shall have at least twelve (12) square feet

of surface area, with one-eighth (1/8) inch openings. The use of a screen is not required if the pump does not discharge into a pressurized distribution system, and the pump has a non-clog impeller capable of passing a 3/4 inch diameter solid sphere.

- (E) Pumps shall be automatically controlled.
- (F) Pumps shall have automatically resetting audible and visual high water level alarm with manual silence switch that is located within audible distance of the building served by the pump. The audible alarm only may be user cancelable. The electrical box for the pump and alarm system shall not be located in an environment that may damage the components.
- (G) Wiring must be of proper construction and gauge and permanently fixed to a supporting structure under permit from the local Administrative Authority.
- (H) The pump and alarm must be connected to separate circuits.
- (I) There shall be a non-resettable digital pump cycle counter in the electrical box.
- (J) There shall be a manual override switch in the electrical box to facilitate dosing control during inspections.

T-102: PIPE MATERIALS AND CONSTRUCTION

- (1) **General statements.** Unless otherwise specified, piping shall consist of materials and be constructed in conformance with the standards of this section. All piping shall be free of defects or damage. All connection of pipes of different diameters shall be made with the proper fittings.
- (2) **Building sewer pipe.** The building sewer shall be constructed with materials in conformance to building sewer standards, as identified in the California Plumbing Code. The building sewer pipe shall have a minimum diameter of three (3) inches.
- (3) **Effluent sewer pipe, header pipe, and fittings.** Header pipe shall extend a minimum of five (5) feet out of the Drop Box. Effluent sewer, header pipe and fittings shall be a minimum three (3) inch diameter, watertight and one of the following:
 - (A) Schedule 40 PVC that meets the most current ASTM D-1785 for three (3) inch pipe and D-2672 for minimum four (4) inch pipe.
 - (B) Schedule 40 Acrylonitrile-Butadiene-Styrene (ABS) that meets the most current ASTM Specification D-2468.
 - (C) ASTM SDR 35 with solvent-welded or rubber-gasketed joints.
 - (D) Other material approved by the Department.

All pipe and fittings shall be capable of passing a deflection test withstanding three hundred-fifty (350) pounds per foot without cracking or collapsing by using the method described in ASTM 2412. Markings shall meet requirements established in ASTM Specification D-2719, subsections 9.1.1, 9.1.2 and 9.1.4. The manufacturer of polyvinyl chloride pipe may be required to certify in

writing to the Department, that pipe and fittings provided for use in absorption facilities within the County comply with all requirements of this section.

- (4) **Distribution piping.** Distribution piping for gravity flow systems shall be a minimum three (3) inches diameter Polyethylene (PE) pipe that meets the most current ASTM Specifications F-810, or other material approved by the Department. The pipe described above shall have two (2) rows of holes spaced one hundred-twenty (120) degrees apart and sixty (60) degrees on either side of a centerline. For distribution pipe, a line of contrasting color shall be provided on the outside of the pipe along the line furthest away and parallel to the two (2) rows of perforations. Markings, consisting of durable ink, shall cover at least fifty (50) percent of the length of the pipe. Markings may consist of a solid line, letters, or a combination of the two. Intervals between markings shall not exceed twelve (12) inches. The holes of each row shall not be more than five (5) inches on center and shall have a minimum diameter of one-half (1/2) inch.
- (5) **Pressure Transport Pipe, Pressure Distribution Manifolds, and Pressure Distribution Laterals.** Pressure transport pipe, pressure distribution manifolds, and pressure distribution lateral (piping and fittings), shall meet the most current requirements for schedule 40 PVC pressure pipe as identified in ASTM Specifications D-1785, or other material approved by the Department. All pressure distribution laterals and all pressure transport and manifold piping shall be adequately sized for the design flow.

T-104: WATERLESS TOILET MATERIALS AND CONSTRUCTION

Waterless toilets shall meet the requirements of the Nevada County Land Use and Development Code, Chapter L-VI Article 5.

T-106: VAULT PRIVY AND PORTABLE TOILET MATERIALS AND CONSTRUCTION

- (1) **General requirements for vault privy and portable toilet shelters.**
- (A) Structures shall be free of hazardous surface features, such as exposed nail points, splinters, sharp edges, and rough or broken boards, and shall provide privacy and protection from the elements.
 - (B) Building ventilation shall be equally divided between the bottom and top halves of the room. All vents shall be screened with sixteen (16) mesh screen of durable material.
 - (C) Buildings shall be fly and rodent proof, and shall have self-closing doors with an inside latch.
 - (D) Vaults shall be vented to the outside atmosphere by a flue or vent stack having a minimum inside diameter of four (4) inches.
 - (E) Interior floors, walls, ceilings, partitions, and doors shall be finished with readily cleanable impervious material resistant to wastes, cleansers and chemicals. Floors and risers shall be constructed of impervious material

- and in a manner that shall prevent entry of vermin.
- (F) The seat opening shall be covered with attached, open-front toilet seats with lids, both of which can be raised to allow use as a urinal.
 - (G) A toilet tissue holder shall be provided for each seat.
- (2) **Additional provisions for vault privy shelters.** In addition to complying with the requirements of Section T-106 (1), vault privies shall be provided with:
- (A) Vents equal in area to a minimum of three (3) square feet; and
 - (B) A minimum clear space of twenty-four (24) inches between multiple-unit installations and a clear space of twelve (12) inches from the seat opening to the side building wall in single and multiple units.
- (3) **Additional provisions for portable toilet shelters.** Portable shelters may be prefabricated, skid mounted, or mobile. In addition to complying with the requirements of Section T-106 (1), portable toilet shelters shall:
- (A) Provide screened ventilation to the outside atmosphere having a minimum area of one (1) square foot per seat;
 - (B) Provide a minimum floor space outside of the riser of nine (9) square feet per seat; and
 - (C) Provide separate compartments with doors and partitions or walls of sufficient height to ensure privacy in multiple-unit shelters except that separate compartments are not required for urinals.
- (4) **General requirements for vault privy and portable toilet facilities.**
- (A) They shall have watertight chambers constructed of reinforced concrete, plastic, fiberglass, metal, or other material of acceptable durability and corrosion resistance, approved by the Department, and designed to facilitate the removal of the wastes.
 - (B) Blackwater shall be stored in an appropriate chamber until proper removal for final disposal elsewhere. Wastes shall be removed from the chamber as necessary to prevent overflow.
 - (C) All surfaces subject to soiling shall be impervious, easily cleanable, and readily accessible.
- (5) **Additional provisions for vault privy facilities.** In addition to meeting the provisions of Section T-106 (4), vault privy facilities shall meet the following:
- (A) The capacity of vaults shall be adequately sized to accommodate the proposed use.
 - (B) A caustic shall be added routinely to vault chambers to control odors.
- (6) **Additional provisions for portable toilet facilities.** In addition to meeting the provisions of Section, T-106 (4), portable toilets shall meet the following:
- (A) Have toilet bowls constructed of stainless steel, plastic, fiberglass, or ceramic or of other material approved by the Department;
 - (B) Waste passages shall have smooth surfaces and be free of obstructions, recesses or cross braces which would restrict or interfere with flow of

- blackwater;
- (C) Biocides and oxidants shall be added to waste detention chambers at rates and intervals recommended by the manufacturer;
 - (D) Chambers and receptacles shall provide a minimum storage capacity of fifty (50) gallons per seat; and
 - (E) Portable shelters housing chemical toilets shall display the business name of the licensed sewage disposal service that is responsible for servicing them

<u>T-110:</u> ARTIFICIAL DRAIN DESIGN, MATERIALS AND CONSTRUCTION

(see Diagram 13)

- (1) **General statement.** For the purposes of these regulations, an artificial drain means a curtain drain or vertical drain that drains or diverts groundwater from the disposal field.
- (2) **General criteria for approval of an artificial drain.** Unless otherwise approved, an artificial drain shall meet the minimum requirements as follows:
 - (A) All artificial drains shall be designed by a Qualified Professional and generally conform to the requirements of special design systems, Section T-054.
 - (B) Artificial drains shall meet the minimum setback requirements to disposal area and replacement area and septic tank as indicated in Table 1 (contained in Section T-112).
 - (C) All other requirements for system approval, except depth to groundwater, can be met. However, after the drain is installed, the groundwater levels shall conform to the requirements for vertical separation to groundwater for the proposed system.
 - (D) For a curtain drain, the site will allow discharge to the ground surface.
 - (E) The Department has the discretion of requiring demonstration that a proposed artificial drain is effective prior to issuing a permit.
- (3) **Design, construction, and materials requirements for artificial drains.**
 - (A) The artificial drain shall be filled with filter material. Prior to backfilling the trench, the filter material shall be covered with filter fabric, straw, or other material approved by the Department. A minimum of six (6) inches of soil cover shall be placed over each trench.
 - (B) A four (4) inch minimum diameter Polyvinyl Chloride (PVC) or Polyethylene (PE) perforated pipe shall be laid the entire length of the trench with two (2) inches of gravel underneath the pipe. **EXCEPTION:** This provision is not applicable to a vertical drain that penetrates a limiting layer and discharges into an underlying permeable soil.
 - (C) The trench shall be situated so that captured water drains by gravity-flow out of outlet pipes. Trench bottoms shall maintain a minimum of one (1)

percent slope throughout the drainage trench. Solid outlet pipe shall be SDR-35 or PVC Schedule 40.

EXCEPTION: This provision is not required for a vertical drain that penetrates a limiting layer and discharges into an underlying permeable soil.

- (D) The trench shall be a minimum of twelve (12) inches wide. For a curtain drain, it shall extend from ground surface at least six (6) inches into a limiting layer. For a vertical drain, the trench shall penetrate through the limiting layer into a permeable soil.
 - (E) The trench shall be installed upslope of the disposal area to be protected.
- (4) **In the event that the discharge outflow from a curtain drain** will impact a neighboring property, the trench outlet from a curtain drain shall only discharge into a drainage channel or other conveyance designed for the transport of water, unless otherwise approved by the Department.

T-112: TABLES

TABLE 1

If a setback is not specified in this Table, the most recently Board of Supervisors-adopted California Plumbing Code setback will be applied.

FEATURES REQUIRING SETBACK: MIN. HORIZONTAL SEPARATION DISTANCE IN FEET

DISTANCE REQUIRED FROM: ↓	FROM DISPOSAL FIELD INITIAL AND REPLACEMENT AREA	FROM SEPTIC TANK AND SAND FILTER	FROM VAULT PRIVY
Wells			
Public well	200'	200'	200'
Private well	100'	100' ¹	150'
Other wells, excluding monitoring wells		100' ¹	150'
Surface waters ²			
Reservoirs, lakes, springs, ponds, or perennial streams	100' ³	100' ^{1, 3}	150'
Intermittent streams			
Storm drainage 25-feet (water flow stops shortly after rain stops)	50' ³	25'	50'
Artificial drains--Vertical/Curtain drains			
Upgradient of system	15' ⁴	15' ⁴	25'
Downgradient of system	50'	25'	50'
Water canals ²			
Flat area	100' ³	100' ^{1, 3}	150'
Sloping area			
-Upgradient	clear ROW ⁵	clear ROW ⁵	25'
-Downgradient	100'	100' ¹	150'

DISTANCE REQUIRED FROM: ↓	FROM DISPOSAL FIELD INITIAL AND REPLACEMENT AREA	FROM SEPTIC TANK AND SAND FILTER	FROM VAULT PRIVY
Cuts manmade in excess of 2.5 feet (top of downslope cut) or escarpments	4 X height ⁶ of the bank, to a maximum of 50'	10'	4 X height ⁶ of the bank, to a maximum of 50'
Property lines Adjacent property with public water Adjacent property with private water	10' 10' ⁷ or 50'	5' 10'	200' 200'
Foundation lines of any structure including garages, out-buildings	8'	5' ⁸	5'
Swimming pools In-ground Above-ground	20' 5'	20' 5'	20' 5'
All Water lines	10' ⁹	5' ¹⁰	10'
Easements ¹¹	Clear	Clear	Clear

FOOTNOTES:

1. The 100-foot setback from a septic tank to a well, surface water or canal, may be reduced to 50-feet if the tank is bedded on a 6" layer of sand or ¾" minus aggregate, and passes a water-tight test.
2. Setbacks shall be measured from the edge of the 10-year historic high water level (western county) or the 100-year historic high water level (eastern county). For western county, where a flood plain is indicated on a FEMA map, the 100-year setback shall be utilized unless a 10-year flood plain has been delineated by a drainage study or other approved methods. In no event shall a system be placed within a 100-year flood plain or within an area of special flood hazard as defined in the Flood Plain Management Regulations contained in Chapter XII of the Nevada County Land Use and Development Code.
3. Where the deepest portion of the surface water liquid level is higher in elevation than the highest liquid level in the leachfield, this setback may be reduced to twenty-five (25) feet.
4. Where the deepest portion of the curtain drain liquid level is higher in elevation than the highest liquid level in the leachfield, this setback may be reduced to ten (10) feet. For septic tanks, this setback may be reduced to ten (10) feet if the tank is bedded on a 6" layer of sand or ¾" minus aggregate, and passes a watertight test.
5. "ROW" = Right of Way
6. The height (in feet) of the cut or escarpment as measured from the toe of the cut or escarpment vertically to the projection of the natural ground slope.

7. The ten (10) feet separation applies where adjacent parcels have been developed with a dwelling and approved water supply as defined in Chapter X, Land Use and Development Code. The 50-foot separation shall be used when adjacent parcels have not been so developed. For subdivisions, disposal fields may be ten (10) feet from interior property lines in private well areas if a well has been drilled on the affected parcel and meets Department standards for an approved domestic water supply. The greater setback shown above shall apply to parcels adjacent to the subdivision.
8. The Department encourages the placement of septic tanks and other treatment units as close as feasible to the minimum separation from the building foundation in order to minimize possible clogging of the building sewer.
9. A water line constructed of materials approved for use within a building and sleeved in schedule 40 pipe (or approved equivalent) may cross a leach field so long as the water pipe is installed above the highest liquid level of the leachfield, and the sleeve extends a minimum of ten (10) feet on both sides of the leachfield and is constructed so as to be watertight.
10. A water line constructed of materials approved for use within a building may be installed crossing a septic tank so long as a minimum of one (1) foot of vertical separation is maintained.
11. A system may be installed underneath overhead power lines or cross other utilities (e.g., canals) providing all of the following conditions are met:
 - (a) Written authorization is received from the utility company operating and maintaining the utility affected or for which the easement or restriction was granted;
 - (b) The Department determines that the encroachment is necessary and there is no other viable area in which to install the system; and
 - (c) All construction modifications required by the Department and the affected utility company(ies) are instituted to carry out the purposes of these regulations. Unless otherwise approved, canal crossings shall be made in conformance with current construction requirements of the Nevada Irrigation District

Table 2

QUANTITIES OF SEWAGE FLOW	GALLONS/DAY
Airports, bus terminals, train stations	8 (per employee)
Bathhouses and swimming pools	10 (per person)
Camps (4 persons per campsite, where applicable) -with central comfort stations -with flush toilets, no showers -construction camps (semi-permanent) -day camps (no meals served) -resort camps (night and day) with limited plumbing -luxury camps	35 (per person) 25 (per person) 50 (per person) 15 (per person) 50 (per person) 100 (per person)
Churches -with kitchen -without kitchen	15 (per seat) 5 (per seat)
Country clubs -per resident member -add per nonresident member present -add per employee	100 25 20 (per 8 hour shift)
Dentist office -per wet chair -add per non-wet chair	200 50
Dwellings -single family dwellings -boarding houses -additional for non-residential boarders -rooming houses -condominiums, apartments and other dwellings except for single-family dwellings	150 (per bedroom) 150 (per bedroom) 10 (per person) 80 (per person) 300 (per unit)
Factories -with shower facilities, no food service or industrial wastes -without shower facilities, no food, service or industrial wastes	35 (per person, per shift) 15 (per person, per shift)
Hospitals	250 (per bed space)
Hotels or motels -with private baths -without private baths	120 (per room) 100 (per room)
Institutions other than hospitals	125 (per bed)

Laundries, self-service washing machines	500 (per machine)
Mobile home parks	250 (per space)
Parks, public picnic areas -with toilet wastes only -with bathhouses, showers and flush toilets	5 (per person) 10 (per person)
Restaurants -with multi-use utensils -with single service utensils -with bars and/or cocktail lounges -drive-in restaurant	50 (per seat) 25 (per seat) 50 (per seat) 50 (per car space)
Retail stores -for customer -add for each employee (add 100 gallons/day for each utility sink)	650 (per toilet) 15 (per shift)
Schools -boarding -day (without gyms, cafeterias or showers) -day (with gyms, cafeterias and showers) -day (with cafeteria, no gym or showers)	100 (per person) 15 (per person) 25 (per person) 20 (per person)
Service stations	10 (per vehicle served)
Theaters-movie	5 (per seat)
Recreational vehicle parks -without individual water and sewer hookups -with individual water sewer hookups	50 (per space) 100 (per space)
Workers -Construction (temporary camps) -day, at schools and offices	50 (per person) 15 (per shift)

T-116: FEES

Fees are set by Resolution of the Board of Supervisors.

DEFINITIONS OF TERMS

A

- (1) "**Absorption Facility**": a system of perforated piping, distribution units, or other absorption systems for receiving the flow from septic tanks or other treatment facilities and designed to distribute effluent for absorption by the soil.
- (2) "**Alteration**": expansion and/or modification of an existing system, or any part thereof.
- (3) "**American Society for Testing Materials**" (ASTM): a technical organization with headquarters located at 1916 Race Street, Philadelphia, Pennsylvania, 19103, which publishes national standards for the testing and quality assurance of construction materials.
- (4) "**Applicant**": an owner or owner's authorized representative.
- (5) "**Artificial Drain**": any artificial drainage feature or structure that intercepts and concentrates groundwater or surface water. For example: driveways, roads, road ditches, agricultural drain tile, cut banks, and curtain drains.

B

- (1) "**Bedrock**": unweathered solid rock that is impermeable or has very slight porosity. If present, fractures are tight, dry, and cemented. Cannot be dug using hand tools.
- (2) "**Bedroom**": any room designated as such by the local Administrative Authority having jurisdiction.
- (3) "**Blackwater**": human or commercial kennel wastes including feces, urine, the carriage water generated through toilet usage, other extraneous substances of body origin, toilet paper and wastes discharged from kitchen sinks and dishwashers.
- (4) "**Building Site**": these regulations adopt by reference the definition as it appears in the Nevada County Land Use and Development Code, Chapter II, Section L-II 2.2, and amendments thereto.
- (5) "**Building Sewer**": that part of the system which conveys sewage into a septic tank or other treatment facility, that begins two feet (2) outside the building or structure from which the sewage originates.

C

- (1) "**Certified System Service Provider**": is a person, or organization having received training and been tested – “certified” - by manufacturers of approved “treatment system-type” equipment, to perform maintenance and monitoring service to installed

sewage disposal systems and subparts that utilize such equipment.

- (2) **“Cesspool”**: an excavation in the ground receiving domestic wastewater, designed to retain the organic matter and solids, while allowing the liquid to seep into the soil. Cesspools differ from seepage pits because cesspool systems do not have septic tanks and are not authorized under this Regulation. The term cesspool does not include pit-prives and out-houses which are not regulated under this Regulation.
- (3) **“Chemical Toilet Facility”**: a non-flushing, non-recirculating toilet facility wherein blackwater is deposited directly into a chamber containing a solution of water and chemicals.
- (4) **“Clay”**: a soil separate consisting of particles less than 0.002 mm in equivalent diameter. See “Soil Texture”.
- (5) **“Claypan”**: a dense, compact layer in the subsoil having a much higher clay content than the overlying material, from which it is separated by a sharply defined boundary. Claypans are usually hard when dry, and plastic and sticky when wet. Also, they usually impede the movement of water and air, and the growth of plant roots.
- (6) **“Commercial Facility”**: any structure or building, or any portion thereof, intended for commercial or industrial use.
- (7) **“Community System”**: a system which serves more than one (1) lot or parcel or more than one (1) single family dwelling. Exception: Community system will not apply to a senior citizen or disabled housing unit as defined in Section L-II 3.33 of the Nevada County Land Use and Development Code, connected to an individual system.
- (8) **“Conditions Associated With Saturation”**:
- (A) Reddish brown or brown oxidized soil horizons with dull gray zones of redox depletions (chromas of 2 or less¹), and red or yellowish red zones of redox concentrations; or
 - (B) Reduced, or iron-depleted, horizons of gray, blue, or olive colors (chromas of 2 or less) with dull red, yellowish red, or brown zones of redox concentrations; or
 - (C) Organic soils and dark-colored soils very high in organic matter.
- ¹Kollmorgen Instruments Corporation, Munsell^R Soil Color Chart, 1990, and amendments.
- (9) **“Contractor”**: a person who possesses an active Class A, B-1, or C-42 contractor's license in accordance with the provisions of the California Business and Professions Code.

- (10) "**Crossover Unit**": a series of pipe fittings connected to the distribution pipe providing serial distribution of effluent in the disposal field.
- (11) "**Curtain Drain**": an artificial drain installed upslope from a disposal field to intercept and divert ground water away from the absorption facility.
- (12) "**Cut-Manmade**": a land surface resulting from mechanical land shaping operations which has a greater than fifty (50) percent slope.

D

- (1) "**Deep Trench System**": a system with disposal trenches greater than thirty (30) inches deep.
- (2) "**Department**": the Nevada County Department of Environmental Health, it's director and designated employees.
- (3) "**Design Capacity**": the maximum quantity of daily sewage flow that a system is designed to handle.
- (4) "**Director**": the Director of the Nevada County Department of Environmental Health or his/her designated employee.
- (5) "**Disposal Area**": the entire area used for underground dispersion of the liquid portion of sewage.
- (6) "**Disposal Field**" (AKA leachfield): a system of disposal trenches.
- (7) "**Disposal Trench**": a ditch or trench with vertical sides and substantially flat bottom designed to receive sewage effluent.
- (8) "**Drop Box**": a structure that receives septic tank or other treatment facility effluent and distributes it to the disposal area.
- (9) "**Distribution Pipe or Lateral Pipe**": a perforated pipe used in the dispersion of septic tank or other treatment facility effluent into disposal trenches.
- (10) "**Distribution Unit**": a Drop Box, crossover unit, dosing tank, diversion valve or box, header pipe, effluent lift pump or other means of transmitting septic tank or other treatment unit effluent from the effluent sewer to the distribution pipes.
- (11) "**Dosing Tank**": a watertight receptacle placed after a septic tank or other treatment facility designed to periodically discharge treated effluent.

(12) "Dwelling": any structure or building or any portion thereof which is used, intended, or designed to be occupied for human living purposes including, but not limited to, houses, houseboats, boathouses, mobile homes, travel trailers, hotels, motels, and apartments.

E

(1) "Effective Absorption Area": the bottom area of a disposal trench, except for deep trench systems. For deep trench systems, this means the sidewall area below the distribution pipe.

(2) "Effective Soil Depth": the depth of soil below the point of dispersal that effectively provides filtration of effluent. Effective soil excludes soil layers that meet the criteria for "Soil With Rapid Permeability" and "Conditions Associated With Saturation" and "Limiting Layers."

(3) "Effluent Lift Pump": a pump used to lift septic tank or other treatment facility effluent to a higher elevation.

(4) "Effluent Sewer": that part of the system of drainage piping that conveys sewage effluent from a septic tank or other treatment facility into a distribution unit or an absorption facility.

(5) "Escarment": any naturally occurring slope which extends nearly vertical, and which is characterized by a long cliff or steep slope which separates two (2) or more comparatively level or gently sloping surfaces, and may intercept one (1) or more layers that limit effective soil depth.

(6) "Existing Lot or Parcel": a lot or parcel legally created prior to the effective date of these regulations.

(7) "Existing System": any installed system constructed in conformance with the rules, laws and local ordinances in effect at the time of construction.

(8) "Expansive Clay Soil": mineral soil that swells and shears when wet, and shrinks and develops cracks when dry, forming slickensides and wedge-shaped structure. Expansive clay soil is very hard or extremely hard when dry, very firm when moist, and very sticky and very plastic when wet. When wet, expansive clay soil is massive, and cracks and structure may not be evident.

(9) "Experimental System": As of January 08, 2010 the Department is no longer accepting experimental system applications. Please see Section T-088 for Supplemental Treatment Systems.

F

- (1) **"Failing System"**: any system which discharges untreated or inadequately treated sewage or septic tank effluent directly or indirectly onto the ground surface, into public waters, or into a dwelling.
- (2) **"Filter Material"**: clean, washed gravel or crushed rock ranging in size from three quarters (3/4) to one and one-half (1-1/2) inches. The material shall be comprised of non-reactive materials, (e.g., limestone would be considered reactive).
- (3) **"Final Map"**: these regulations adopt by reference the explanation and provisions as they appear in the Nevada County Land Use and Development Code Chapter L, Section L-IV 1.3, and amendments thereto.
- (4) **"Fractured Bedrock"**: moderately to slightly weathered bedrock that usually is hard and fractured, but not impermeable to water. Not diggable with hand tools.
- (5) **"Fragipan"**: a natural subsurface horizon with high bulk density and/or high mechanical strength relative to the horizons above, seemingly cemented when dry, but when moist showing a moderate to weak brittleness. Fragipans are low in organic matter, mottled, slowly or very slowly permeable to water, considered to be root restricting, and usually show occasional or frequent bleached cracks forming polygons.

G

- (1) **"Graywater"**: untreated wastewater that has not come into contact with toilet wastes. It includes used water from bathtubs, showers, bathroom wash basins, and from clothes washing machines and laundry tubs. It does not include wastewater from kitchen sinks, dishwashers or laundry water from soiled diapers.
- (2) **"Graywater Disposal System"**: an on-site sewage disposal system consisting of a tank and shallow disposal field meeting the requirements of the State Graywater Law.
- (3) **"Groundwater"**: a layer or lens of soil or fractured bedrock in which all open spaces are filled with water. The thickness and extent of groundwater may vary seasonally or periodically in response to changes in the rate or amount of groundwater recharge or discharge.

H

- (1) **"Hardpan"**: a relatively hard, impervious, and often clayey layer of soil lying at or just below the surface, produced as result of cementation of soil particles by precipitation of relatively insoluble materials such as silica, iron oxide, calcium carbonate, and organic matter. Its hardness does not change appreciably with changes in moisture content, and it does not slake or become plastic when mixed with water.

- (2) "**Header Pipe**": the tight-jointed part of the sewage drainage conduit which receives septic tank effluent from the Drop Box, crossover unit or effluent sewer and conveys it to and within the disposal area.
- (3) "**Health Officer**": the Health Officer of Nevada County, or his/her designee.
- (4) "**Holding Tank**": a watertight receptacle designed to receive and store sewage to facilitate disposal at another location.
- (5) "**Horizon**": see "Soil Horizon"

I

- (1) "**Individual System**": a system that is not a community system, and includes a system serving both a single family dwelling and senior citizen or disabled housing unit (as defined in the Section L-II 2.2 of the Nevada County Land Use and Development Code) connected to the same system.
- (2) "**Installer**": see Contractor.
- (3) "**Intermittent Stream**": a natural stream that does not flow continuously throughout the year, but that has a well-defined channel of stream gravels or bedrock control.
- (4) "**Invert**": the lowest portion of the internal cross section of a pipe or fitting.

J

K

L

- (1) "**Limiting Layer**": a layer that impedes the movement of water, air, or the growth of plant roots. For example: hardpan, claypan, fragipan, bedrock, and expansive clay soil.
- (2) "**Lot**": these regulations adopt by reference the definition as it appears in the Nevada County Land Use and Development Code Chapter IV, Section L-IV 1.3, and amendments thereto.

M

- (1) "**Monitoring Well**": any artificial excavation by any method for the purpose of monitoring fluctuations in ground water levels, quality of underground water, or the concentration of contaminants in underground water.
- (2) "**Mottles**": spots or blotches of different soil color or shades of soil color interspersed with the dominant color.

- (3) "**Mound System**": an above-ground or at-grade system that consists of a pressure distribution network that evenly distributes sewage effluent to a "mounded" bed of filter material over sand media.

N

- (1) "**Non-Expansive Clay**": clay soil that does not demonstrate expansion when wetted. Properties of plasticity, cohesion, shrinkage, and swelling are negligible.

O

- (1) "**Occupant**": any person living or sleeping in a dwelling.
- (2) "**Owner**": any person who alone, or jointly, or severally with others:
- (A) Has legal title to any single lot, dwelling, dwelling unit, or commercial facility;
 - (B) Has care, charge, or control of any real property as agent, executor, executrix, administrator, administratrix, trustee or guardian of the estate of the holder of legal title, or as the owner's authorized representative.
- (3) "**Owner's Authorized Representative**": a person authorized in writing by an owner of or holder of an easement sufficient to authorize the work on the land on which the system is to be installed, to represent the owner's or easement holder's interests, (e.g., Qualified Professional, contractor, real estate agent, etc.)

P

- (1) "**Parcel**": these regulations adopt by reference the definition as it appears in the Nevada County Land Use and Development Code, Chapter IV, Section L-IV 1.3, and amendments thereto.
- (2) "**Parcel Map**": these regulations adopt by reference the definition as it appears in the Nevada County Land Use and Development Code, Chapter IV, Section L-IV 1.3, and amendments thereto.
- (3) "**Parent Rock**": the type of geologic material the soil has developed in. In soil descriptions parent rock is noted as volcanic, granitic, metasedimentary, alluvium, or other.
- (4) "**Percolation Test**": a measurement of the ability of soil to absorb liquid.
- (5) "**Perennial Stream**": a natural stream where water is present nine (9) months or more of the year, including all NID and other public water conveyances.
- (6) "**Permit**": the written document issued and signed by the Department, which authorizes the permittee to construct a system or any part thereof.
- (7) "**Person**": any individual, corporation, association, firm, organization, partnership, or company.

- (8) **"Pit Privy"**: a structure for collection of human waste without the aid of water. It consists of a shelter built above an excavated pit into which human waste falls. The pit privy has no direct water connection.
- (9) **"Policy"**: The State Water Resources Control Board adopted the *Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems* (Policy) on June 19th, 2012 which was finalized in May 2013. Pursuant to Water Code Section 13291(b)(3), the adopted Policy describes requirements authorizing a qualified local agency to implement the adopted policy. The Policy describes four "Tiers" of Onsite Wastewater Treatment System management. Tier 2 describes the requirements for developing a "Local Area Management Plan" (LAMP), which when approved, becomes the standard by which authorized local agencies regulate OWTS. The Policy requires the appropriate RWQCB - in this case the Central Valley RWQCB (CVRWQCB) - to review the LAMP, and when it is deemed in compliance with Policy requirements, to give its approval. An approved LAMP is equivalent to a "Conditional Waiver of Waste Discharge Requirements" for OWTS within the local agency jurisdiction. This document constitutes the Nevada County LAMP for OWTS in Nevada County.
- (10) **"Pollution"**: such alteration of the physical, chemical or biological properties of any waters of the County of Nevada including change in temperature, taste, color, turbidity, silt or odor of the waters, or such discharge of any liquid, gaseous, solid, radioactive or other substance into any waters of the County, which will or tends to, either by itself or in connection with any other substance, create a public nuisance or which will or tends to render such waters harmful, detrimental or injurious to public health, safety or welfare, or to the domestic, commercial, industrial, agricultural, recreational or other legitimate beneficial uses or to livestock, wildlife, fish or other aquatic life or the habitat thereof.
- (11) **"Portable Toilet Shelter"**: any easily moved structure built to house a toilet facility.
- (12) **"Pressure Distribution Lateral"**: piping and fittings in pressure distribution systems which distribute septic tank or other treatment unit effluent to filter material through small diameter orifices.
- (13) **"Pressure Distribution Manifold"**: piping and fittings in a pressure distribution system which supply effluent from pressure transport piping to pressure distribution laterals.
- (14) **"Pressure Distribution System"**: any system designed to uniformly distribute septic tank or other treatment unit effluent under pressure in an absorption facility or other treatment/disposal unit.
- (15) **"Pressure Transport Piping"**: piping which conveys septic tank or other treatment unit effluent to a pressure distribution manifold by use of a pump.

- (16) **"Prior Approval"**: a written approval for on-site sewage disposal, for a specific lot, issued prior to the effective date of these regulations.
- (17) **"Projected Daily Sewage Flow"**: the quantity of sewage predicted to be generated on a daily basis for a building or structure.
- (18) **"Public Health Hazard"**: a condition created by a discharge of biological, chemical, physical, and/or radiological agents which are likely to cause human illness, disorders or disability.
- (19) **"Public Sewer System"**: any sewer system constructed, installed, maintained, operated and/or owned by or for a municipality or taxing district established for sewage disposal purposes.
- (20) **"Public Waters"**: lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, marshes, inlets, canals, and all other bodies of surface or underground waters, natural or artificial, public or private, which are wholly or partially within or bordering the County of Nevada or within its jurisdiction.

Q

- (13) **"Qualified Professional"**: one of the following persons (exclusive of Department personnel)
- (A) Certified Engineering Geologist,
 - (B) Certified Professional Soil Scientist,
 - (C) Registered Civil Engineer, or
 - (D) Registered Environmental Health Specialist

R

- (1) **"Redoxymorphic Features"**: features formed by the processes of reduction, translocation, and oxidation of Fe and Mn oxides in seasonally saturated soils. Redoxymorphic features are described in soil horizons by various types of: redox concentrations, redox depletions, and reduced matrices.
- (2) **"Repair"** (AKA System Repair): installation, replacement and or connection of the portion(s) of a system necessary to eliminate a public health hazard or pollution of public waters created by a failing system.
- (3) **"Replacement Area"** (AKA Repair Area): an area that is one hundred (100) percent in size of the area approved for the initial sewage system disposal field, and in a separate location.

S

- (1) **"Sand"**: a soil particle between 0.05 mm and 2.0 mm in equivalent diameter. See "Soil Texture".
- (2) **"Sand Filter System"**: a system combining a septic tank or other treatment unit,

dosing system with effluent pump(s) and controls, piping and fittings, sand filter and absorption facility.

- (3) "**Seasonal Dwelling**": a dwelling that is not used as a full time residence, e.g., a vacation home.
- (4) "**Scum**": a mass of sewage solids floating on the surface of sewage.
- (5) "**Septic Tank**": a watertight receptacle which receives sewage from a building or structure, is designed to separate solids from liquids, retains and digests organic matter and discharges the resulting effluent to a second treatment unit or to a soil absorption facility.
- (6) "**Septic Tank Effluent**": partially treated sewage which is discharged from a septic tank.
- (7) "**Sewage**": blackwater, graywater, and/or any liquid contaminated with materials thereof.
- (8) "**Silt**": a soil particle between 0.05 and 0.002 mm in equivalent diameter. See "Soil Texture".
- (9) "**Site**"(AKA Building Site): an area of a lot or parcel designated for a specific purpose including an approved area for sewage disposal, building, etc.
- (10) "**Single Family Dwelling**": a dwelling designed for and occupied exclusively by, one family.
- (11) "**Slope**": the rise or fall in feet per one hundred (100) feet of horizontal distance. Slope is expressed as a percent of grade. For example: a land surface at a 45 degree angle has a slope of 100%.
- (12) "**Soil**": the unconsolidated mineral or organic matter on the surface of the earth that has been subjected to and influenced by genetic and environmental factors of: parent material, climate, macro- and micro-organisms, and topography, all acting over a period of time and producing a product--soil--that differs from the material from which it is derived in many physical, chemical, biological, and morphological properties and characteristics.
- (13) "**Soil Color**": color of moist soil in terms of hue, value, and chroma—for example, 10YR 3/2—using a Munsell Soil Color Chart (Kollmorgen Instruments Corporation, 1990).
- (14) "**Soil Consistence**": the attributes of soil material as expressed in its degree of cohesion and adhesion or in its resistance to deformation or rupture. Terms used for describing consistence are: *wet soil* - nonsticky, slightly sticky, sticky, and very

sticky; *plasticity* - nonplastic, slightly plastic, plastic, and very plastic; *moist soil* - loose, very friable, friable, firm, very firm, and extremely firm; *dry soil* - loose, soft, slightly hard, hard, very hard, and extremely hard; *cementation* - weakly cemented, strongly cemented, and indurated.

- (15) **"Soil Description"**: a notation of soil properties observed at a soil test pit including slope, parent rock type, rock fracturing, effective soil depth, and depth to groundwater, if observed; and, for each horizon observed, a notation of depth, texture, rock fragment content, color, redoxymorphic features, structure, pores, clay films, consistence, plasticity, stickiness, roots, horizon boundary, and moisture content.
- (16) **"Soil Horizon"**: a layer of soil that is distinguishable from adjacent layers by characteristic physical properties such as structure, color, or texture, or by chemical composition, including content of organic matter or degree of acidity or alkalinity.
- (17) **"Soil Horizon Boundary"**: the topography and distinctness of the change between two soil horizons. In soil descriptions, the soil horizon boundary is noted as smooth, wavy, irregular, or broken. Distinctness of the change between horizons is noted as abrupt, clear, gradual, or diffuse.
- (18) **"Soil Moisture"**: the moisture content of the soil at the time the soil description was made. Described as dry, damp, moist, saturated, or seepage.
- (19) **"Soil Plasticity"**: see "Soil Consistence".
- (20) **"Soil Pores"**: generally tubular voids in the soil material formed by roots, animals, and other agents. In soil descriptions pores are noted as few, common, or many in quantity, and as fine, medium, or coarse in size.
- (21) **"Soil Rock Fragment"**: rock or mineral particles in the soil greater than 2.0 mm in diameter. Includes gravel, cobbles, and stones. In soil descriptions noted as percent by volume.
- (22) **"Soil Roots"**: the abundance and size of roots in a soil horizon. In soil descriptions abundance is noted as none, few, common, or many. Where present, root size is noted as very fine, fine, medium, or coarse.
- (23) **"Soil Separate"**: the groups of mineral particles separated on the basis of a range in size. The principal separates are sand, silt, and clay.
- (24) **"Soil Stickiness"**: see "Soil Consistence".
- (25) **"Soil Structure"**: the combination or aggregation of primary soil particles into aggregates or clusters (peds), which are separated from adjoining peds by surfaces of weakness. Soil structure is classified on the basis of size, shape, and distinctness

into classes, types, and grades.

- (26) "Soil Test Pit":** an excavation of sufficient size and depth to allow thorough examination of the soil to evaluate its suitability for sewage disposal.
- (27) "Soil Texture":** the relative proportions of soil separates in a soil as described by the twelve (12) classes of soil texture. The major textural classifications are defined as follows:
- (A) Sand:** Soil material that contains 85 percent or more of sand; percentage of silt, plus 1.5 times the percentage of clay shall not exceed 15.
 - (B) Loamy sand:** Soil material that contains at the upper limit 85 to 90 percent sand, and the percentage of silt plus 1.5 times the percentage of clay is not less than 15; at the lower limit it contains not less than 70 to 85 percent sand, and the percentage of silt plus twice the percentage of clay does not exceed 30.
 - (C) Sandy loam:** Soil material that contains either 20 percent clay or less, and the percentage of silt plus twice the percentage of clay exceeds 30, and 52 percent or more sand; or, less than 7 percent clay, less than 50 percent silt and between 43 and 52 percent sand.
 - (D) Loam:** Soil material that contains 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand.
 - (E) Silt loam:** Soil material that contains either at least 50 percent silt and 12 to 27 percent clay; or, 50 to 80 percent silt and less than 12 percent clay.
 - (F) Silt:** Soil material that contains 80 percent or more silt and less than 12 percent clay.
 - (G) Sandy clay loam:** Soil material that contains 20 to 35 percent clay, less than 28 percent silt, and 45 percent or more sand.
 - (H) Clay loam:** Soil material that contains 27 to 40 percent clay and 20 to 45 percent sand.
 - (I) Silty clay loam:** Soil material that contains 27 to 40 percent clay and less than 20 percent sand.
 - (J) Sandy clay:** Soil material that contains 35 percent or more clay and 45 percent or more sand.
 - (K) Silty clay:** Soil material that contains 40 percent or more clay and 40 percent or more silt.
 - (L) Clay:** Soil material that contains 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.
- (28) "Soil With Rapid Permeability":** soil with:
- (A)** Percolation rates less than six (6) minutes per inch; or
 - (B)** Soil texture classes of sand or loamy sand; or
 - (C)** Soils containing more than 50% rock fragments greater than 2 mm in diameter; or
 - (D)** Soils with stones, cobbles, gravel, and rock fragments with too little soil material to fill interstices larger than one (1) mm in diameter.
- (29) "Special Design System":** any Department-approved system that is not a standard

system, experimental system, vault privy, holding tank, pit privy, graywater system, waterless or portable toilet.

(31) "Supplemental Treatment System": shall mean any on-site wastewater system, system component, or proprietary device, which provides enhanced treatment to that of EPA Class I effluent standards.

(32) "System": a sewage disposal facility, including replacement area, commencing with the building sewer, designed for the collection, treatment and disposal of sewage, or sewage storage only, on a site.

T

(1) "Toilet Facility": A fixture housed within a toilet room, bathroom or shelter for the purpose of receiving blackwater.

U

(1) "Unstable Landforms": areas that show evidence of down-slope mass movement such as landslides, earthflows, debris flows, or rockfalls. Unstable landforms may have hummocky relief and undrained depressions, and may show evidence of instability such as cracks, escarpments, landslide scars, tilted telephone poles and fence posts, or bent tree trunks.

V

(1) "Vault Privy": a structure for collection of human waste without the aid of water. It consists of a shelter built above a vault in the ground into which human waste falls. The vault privy has no direct water connection.

(2) "Vertical Drain": an artificial drain upslope from a disposal field to intercept and divert groundwater from the absorption facility by penetrating a limiting layer and draining into underlying permeable soils.

(3) "Vertical Separation": the vertical distance between the disposal trench bottom and a limiting layer, fractured bedrock, or groundwater.

W

(1) "Waterless Toilet": a composting toilet, incinerating toilet or some other device as may be approved in the future for the holding and processing of human waste.

(2) "Water Table": that level of groundwater where the hydraulic pressure is zero.

X

Y

Z

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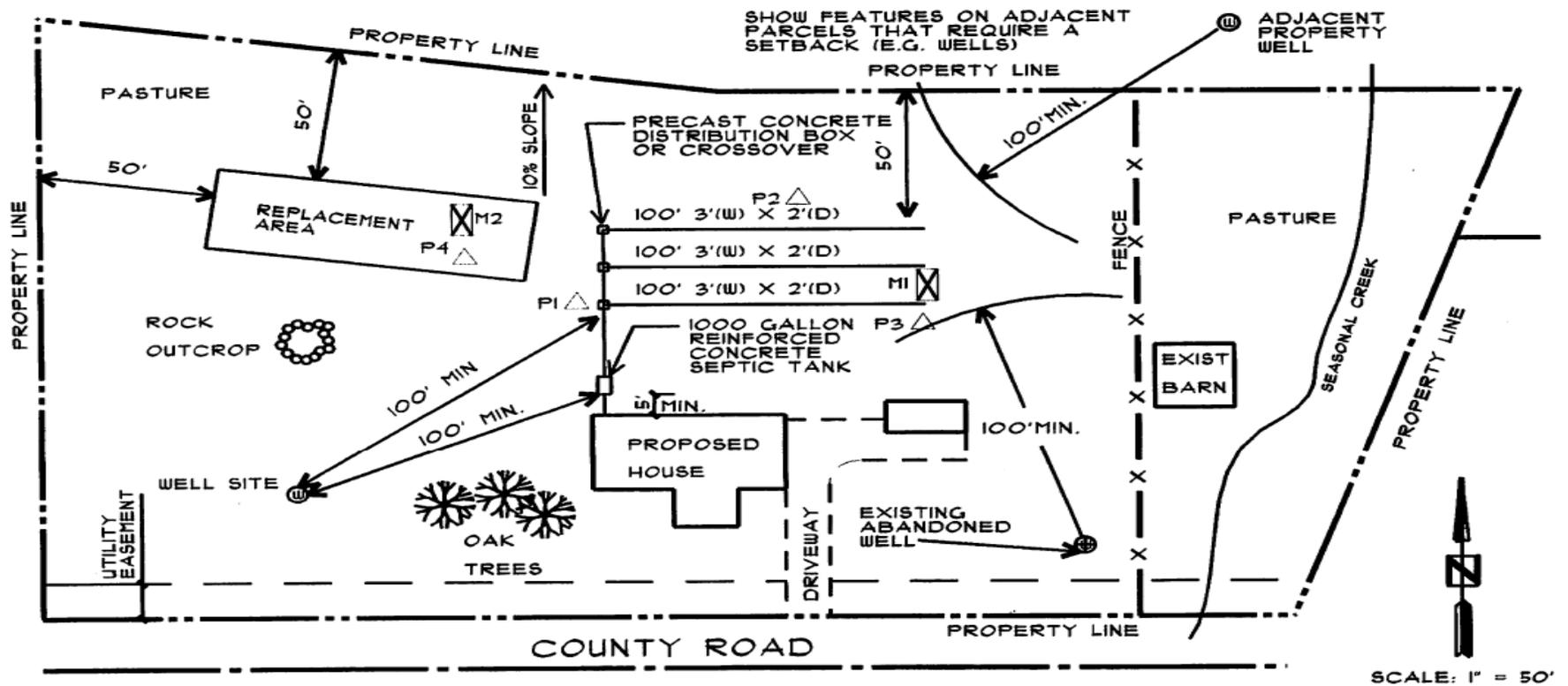
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DIAGRAMS

- (1) Diagram 1: Sample Location Map and OSSE Plan
- (2) Diagram 2: Sample Site Development Plan
- (3) Diagram 3: Percolation Test Assembly
- (4) Diagram 4: Septic Tank Detail
The liquid depth of 36" needs to be changed to 30" as per T-092 (E)
- (5) Diagram 5: Typical Pre-Cast Distribution Box
- (6) Diagram 6: Cross-Over Detail
- (7) Diagram 7: Standard System (Gravity Flow Distribution)
- (8) Diagram 8: Typical Equal Distribution System
- (9) Diagram 9: Typical Serial Distribution Standard System Sloping Sites
- (10) Diagram 10: Special Design System Disposal Trench Risers
- (11) Diagram 11: Capping Fill System
- (12) Diagram 12: Pressurized Distribution System
- (13) Diagram 13: Dosing/Pump Tank
- (14) Diagram 14: Typical Curtain Drain

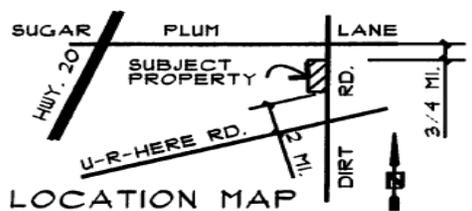
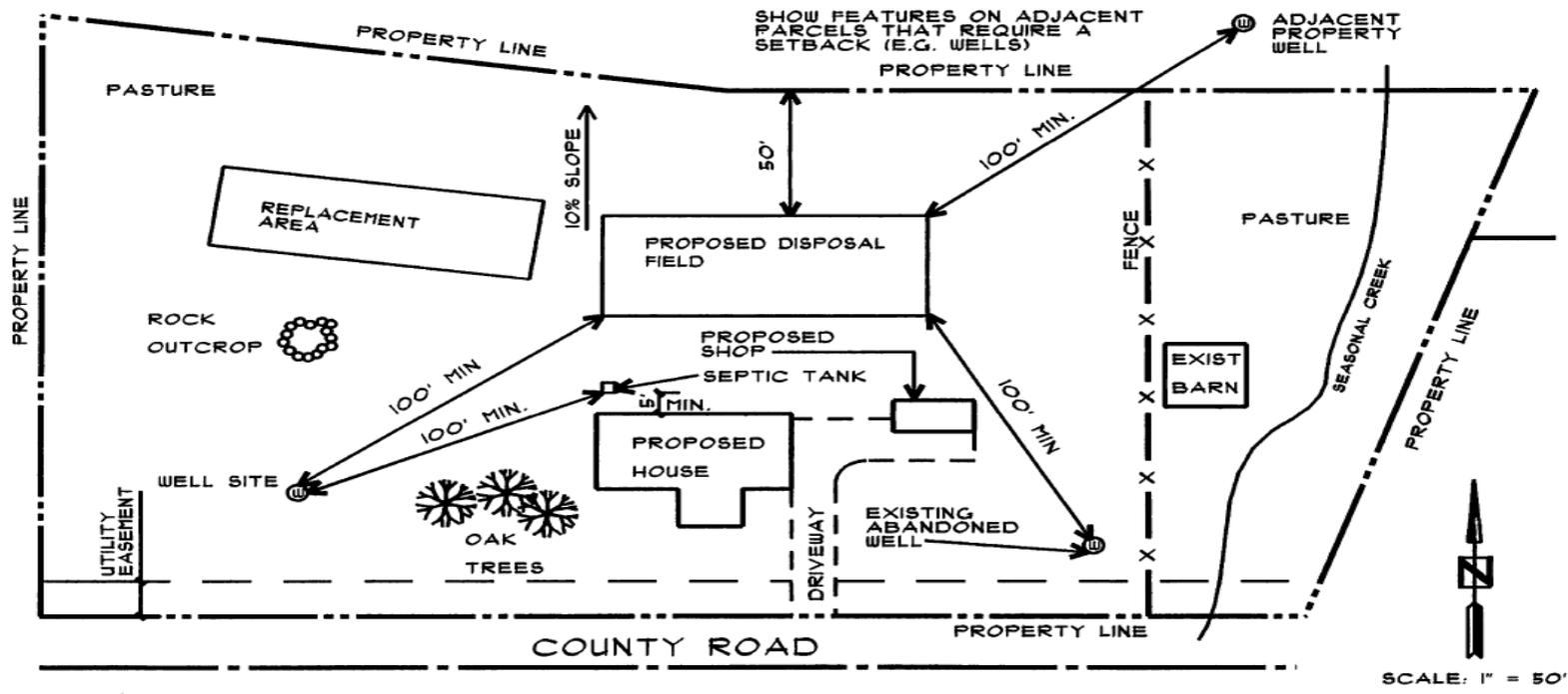
DIAGRAM 1- SAMPLE LOCATION MAP AND SITE EVALUATION PLAN



APPLICANT'S NAME
 ASSESSOR PARCEL NUMBER
 PARCEL ADDRESS OR LOT NO.
 (INCLUDE STREET NAME)

COUNTY OF NEVADA DEPARTMENT OF ENVIRONMENTAL HEALTH
SAMPLE SITE DEVELOPMENT PLAN

DIAGRAM 2 – SAMPLE SITE DEVELOPMENT PLAN



APPLICANT'S NAME
 ASSESSOR PARCEL NUMBER
 PARCEL ADDRESS OR LOT NO.
 (INCLUDE STREET NAME)

COUNTY OF NEVADA
 DEPARTMENT OF ENVIRONMENTAL HEALTH

SAMPLE LOCATION MAP AND SITE EVALUATION PLAN

DIAGRAM 3 – SAMPLE SITE DEVELOPMENT PLAN

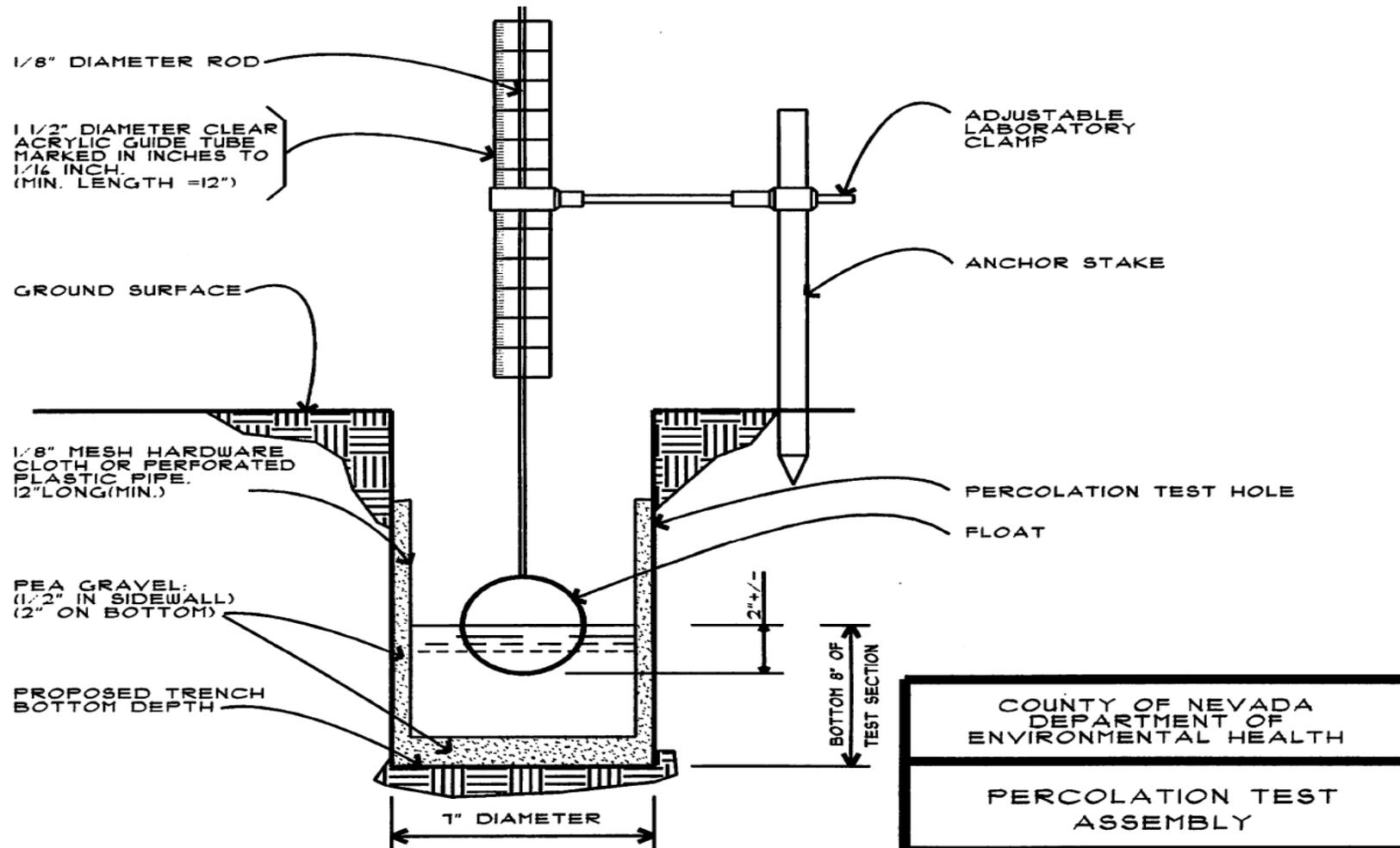
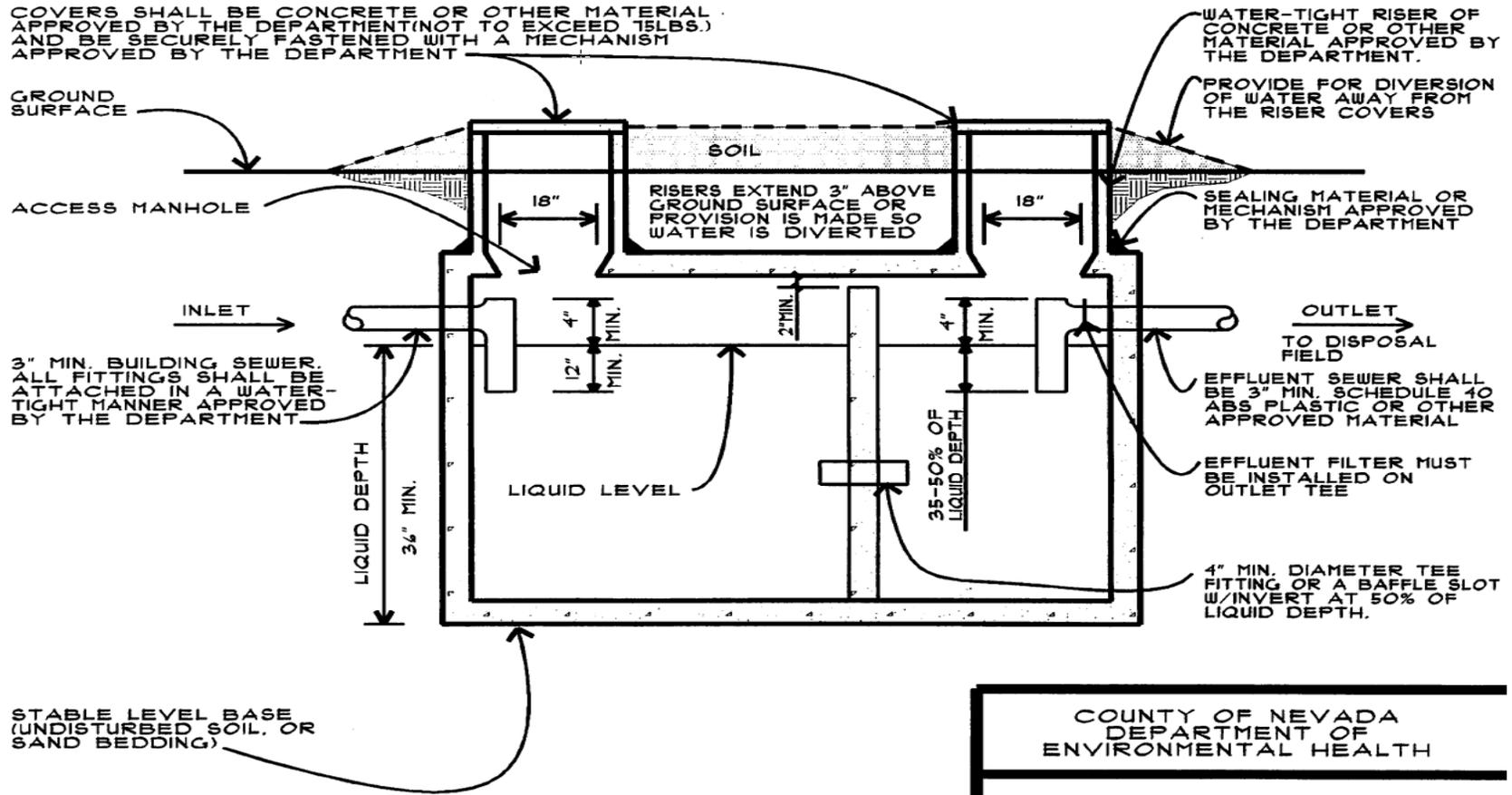


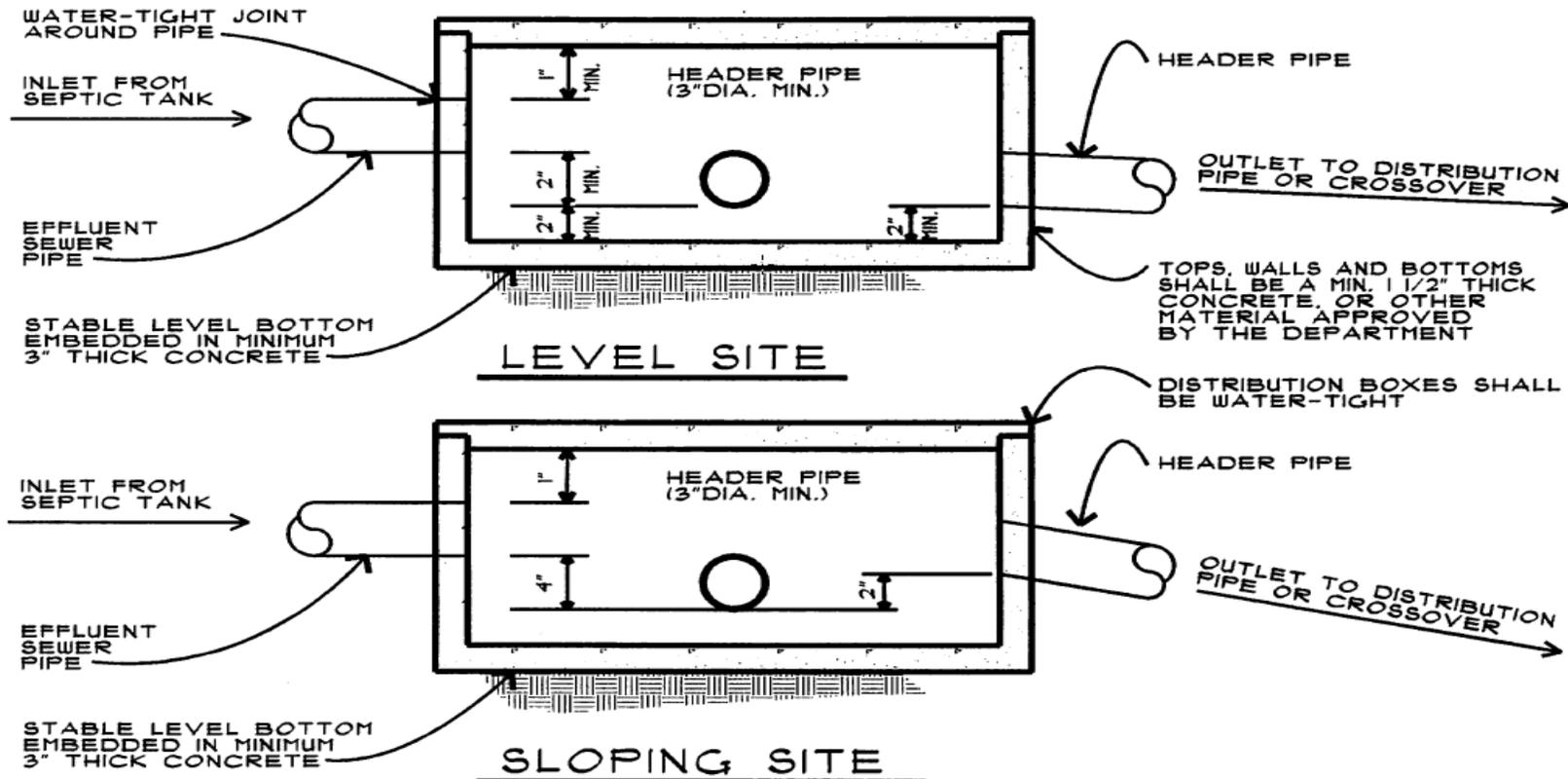
DIAGRAM 4 – SEPTIC TANK DETAIL



COUNTY OF NEVADA
 DEPARTMENT OF
 ENVIRONMENTAL HEALTH

SEPTIC TANK DETAIL

DIAGRAM 5 – TYPICAL PRE-CAST DISTRIBUTION BOX



NOTES:

1. EFFLUENT SEWER PIPE WITHIN 5' OF SEPTIC TANK SHALL BE SCHEDULE 40 PVC-DWV(DRAIN WASTE VENT) OR ABS.
2. HEADER PIPE SHALL EXTEND A MIN. OF 5' FROM THE DISTRIBUTION BOX TO THE DISTRIBUTION PIPE, BE A MIN. 3" IN DIAMETER AND BE CONSTRUCTED OF ONE OF THE SAME MATERIALS APPROVED FOR THE EFFLUENT SEWER.
3. DISTRIBUTION BOX SHALL BE A MIN. 5' FROM SEPTIC TANK.

COUNTY OF NEVADA
 DEPARTMENT OF
 ENVIRONMENTAL HEALTH

 TYPICAL PRE-CAST
 DISTRIBUTION BOX

DIAGRAM 6 – CROSS OVER DETAIL

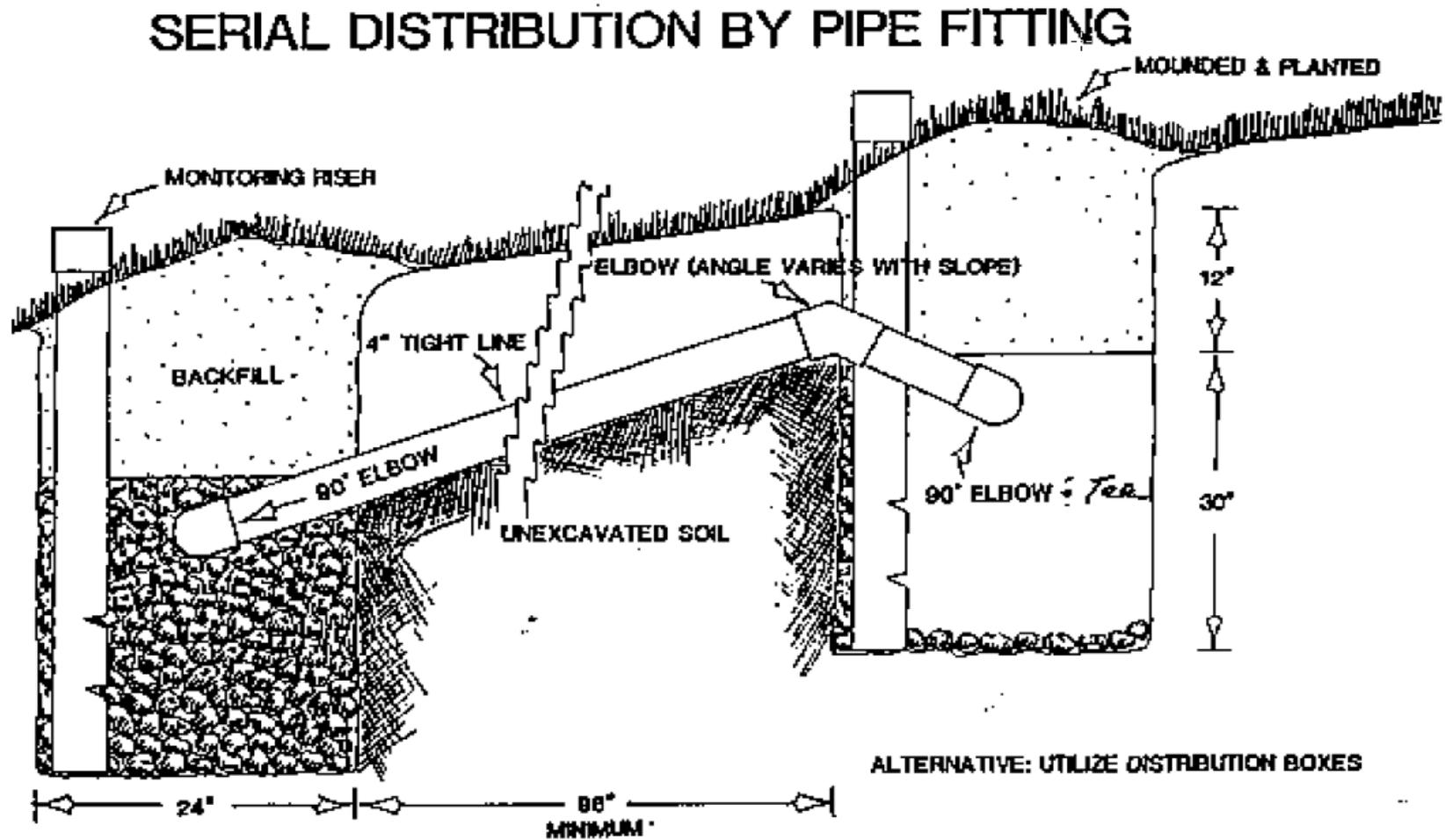


DIAGRAM 8 – TYPICAL EQUAL DISTRIBUTION SYSTEM

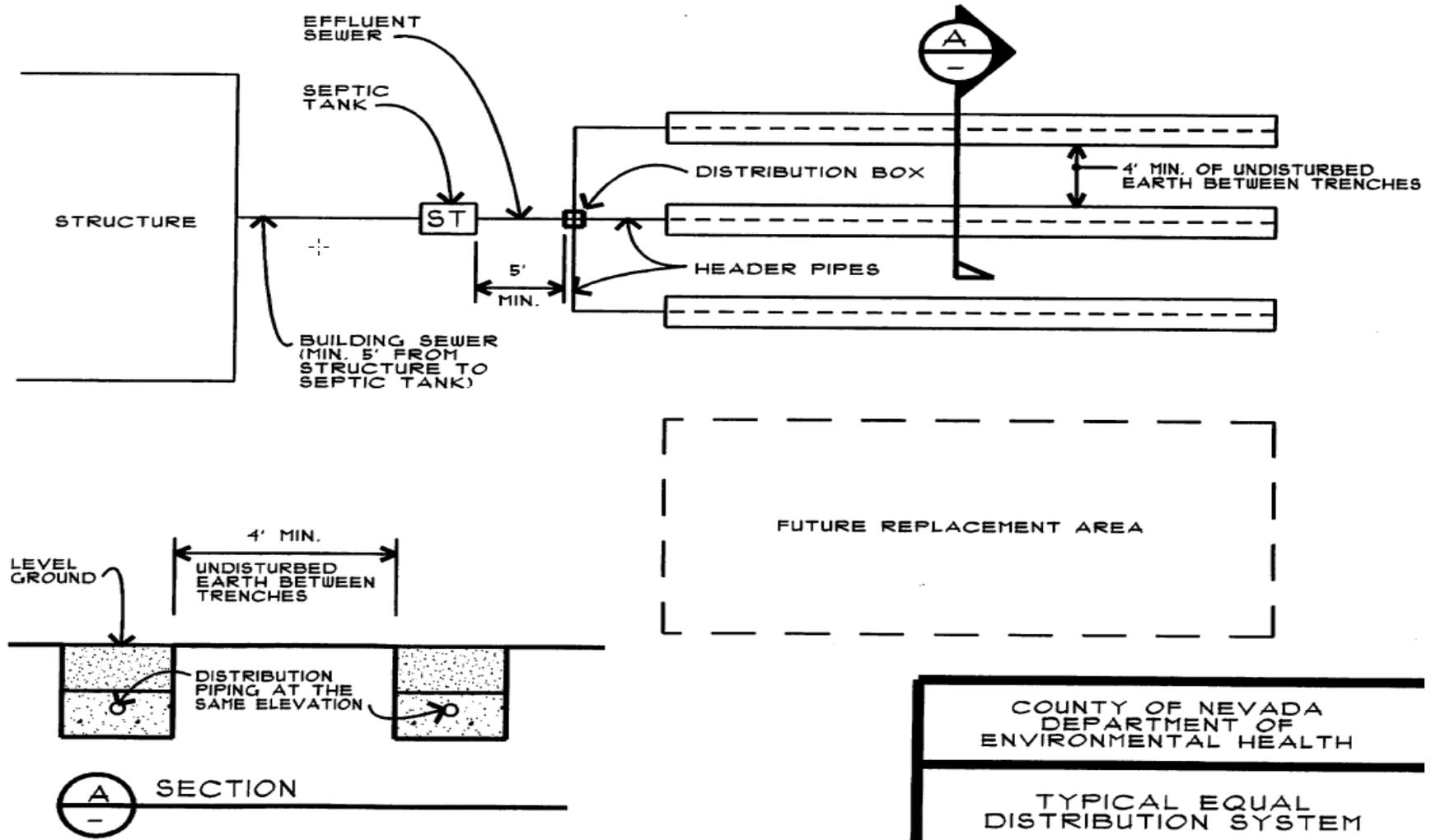
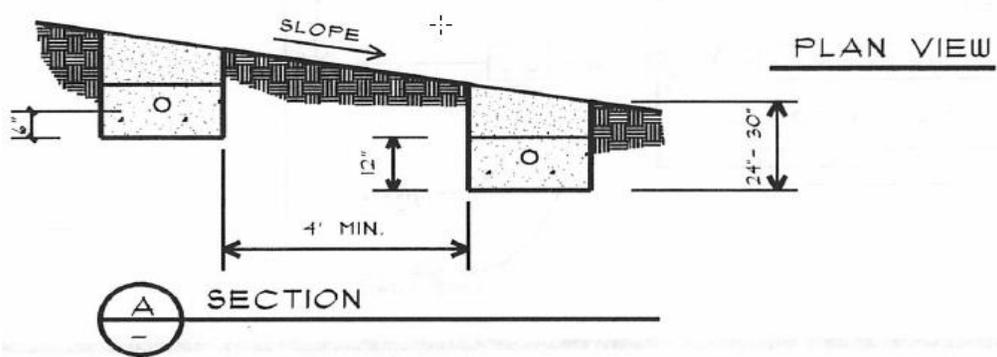
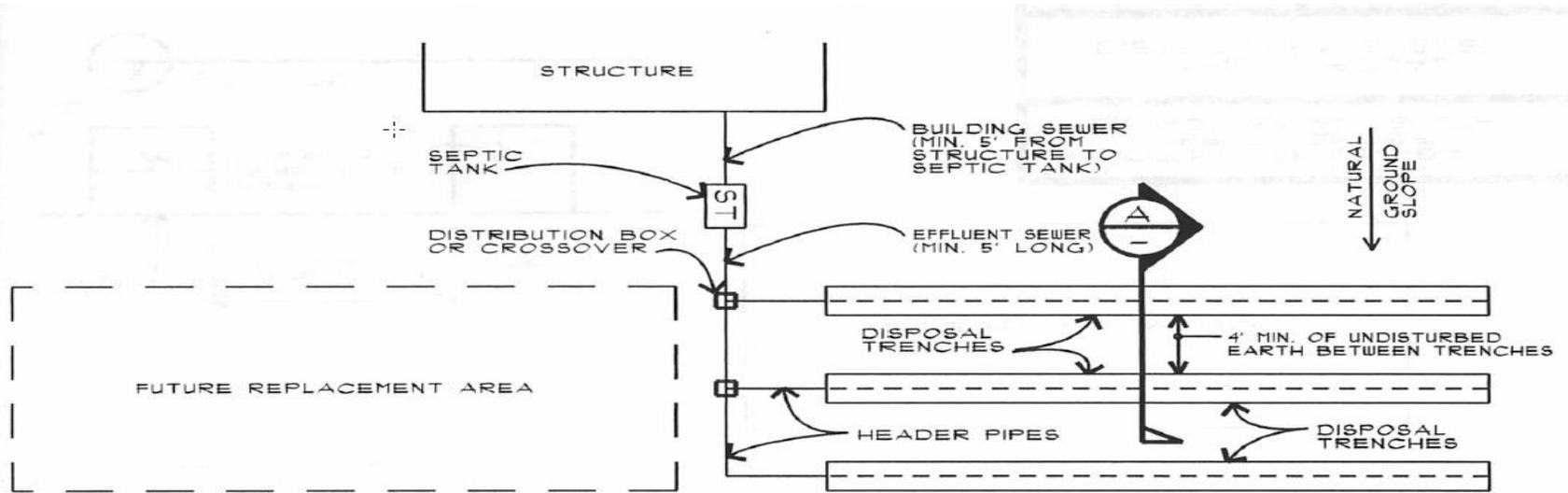


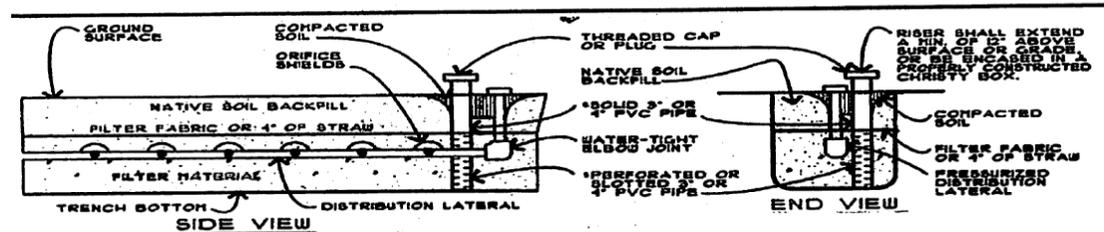
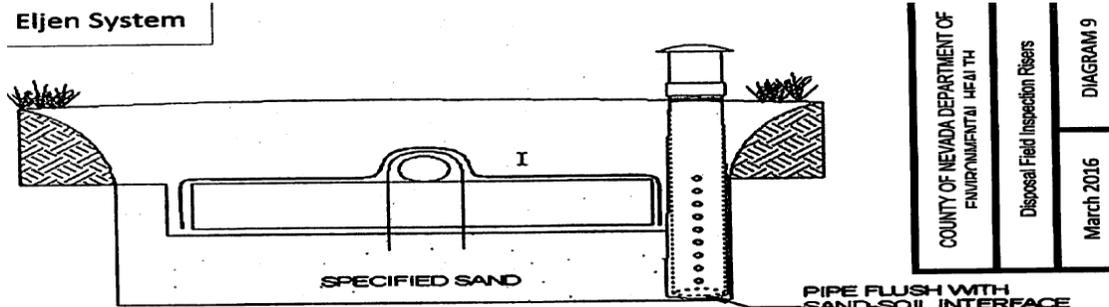
DIAGRAM 9 – TYPICAL SERIAL DISTRIBUTION STANDARD SYSTEM SLOPING SITES



COUNTY OF NEVADA
 DEPARTMENT OF
 ENVIRONMENTAL HEALTH

TYPICAL SERIAL DISTRIBUTION
 STANDARD SYSTEM
 SLOPING SITES

DIAGRAM 10 – SPECIAL DESIGN SYSTEM DISPOSAL TRENCH RISERS



* THE SOLID & PERFORATED PVC RISER SHALL BE A NON-JOINTED CONTINUOUS PIPE.

Pressure Distribution with Inspection & Blow off Risers

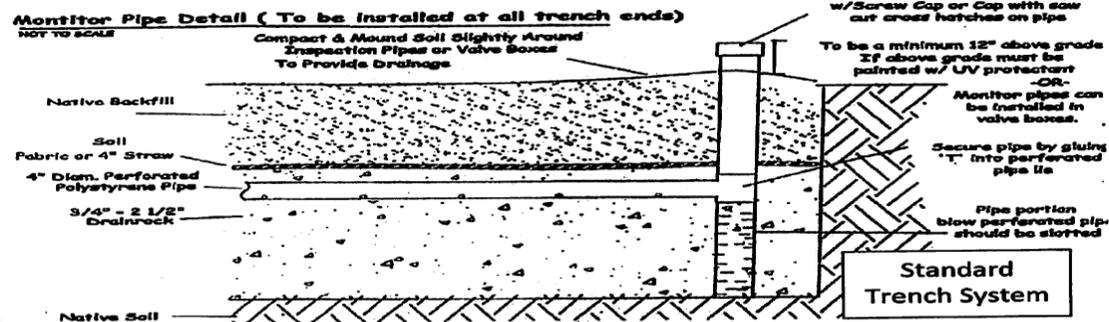
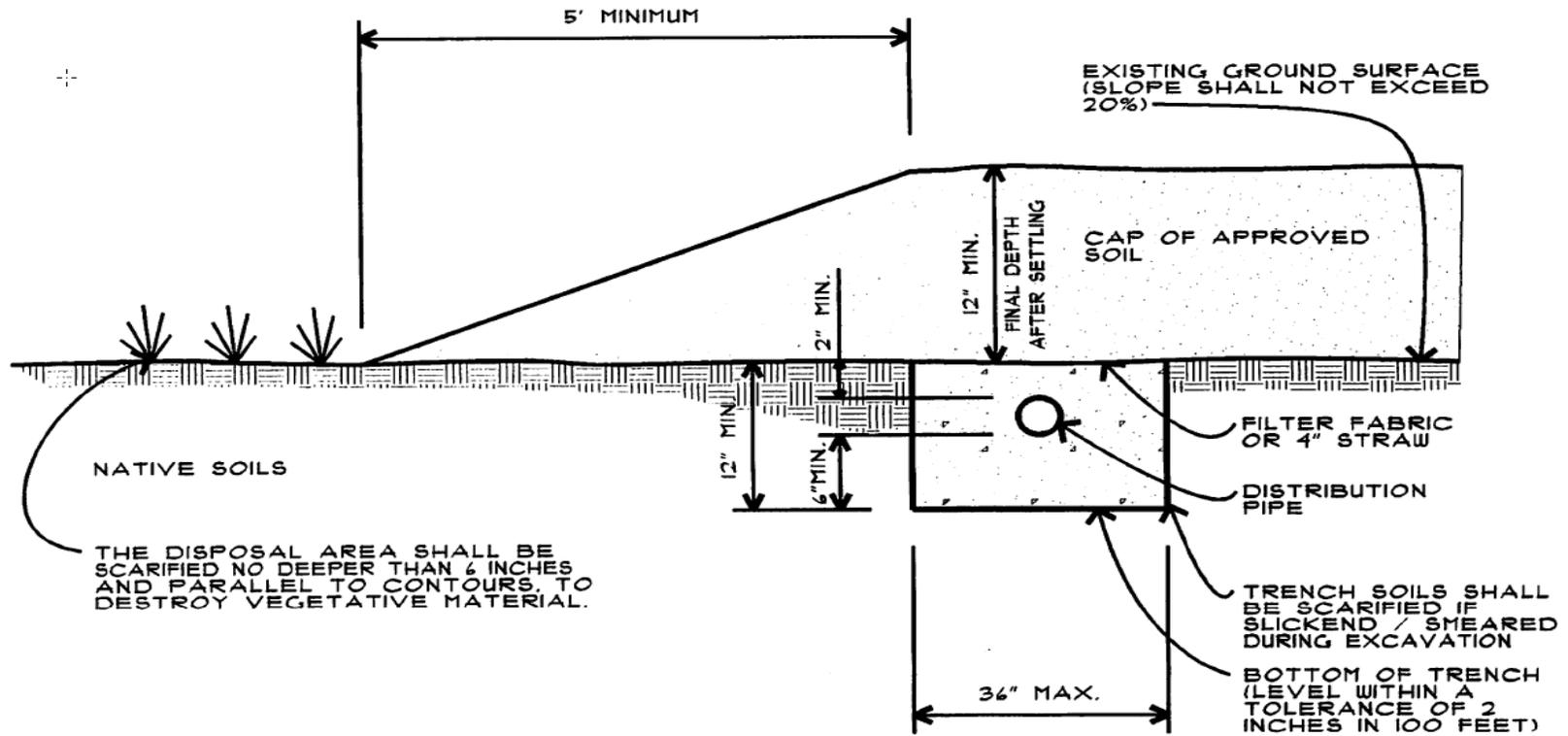


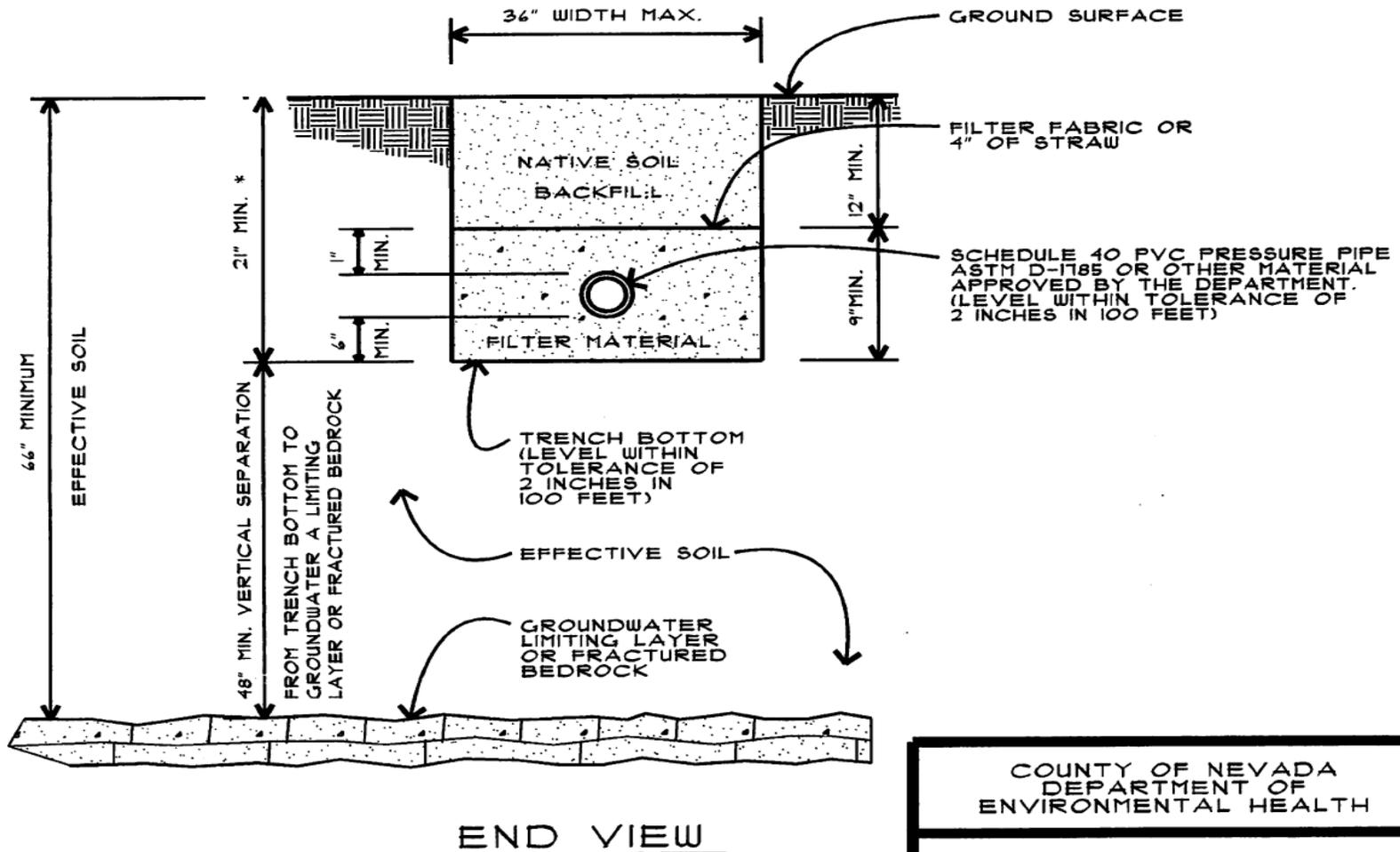
DIAGRAM 11 – CAPPING FILL SYSTEM



COUNTY OF NEVADA
 DEPARTMENT OF
 ENVIRONMENTAL HEALTH

CAPPING FILL SYSTEM

DIAGRAM 12 – PRESSURIZED DISTRIBUTION SYSTEM



NOTE:
 * EXCAVATED TRENCH DEPTH MAY BE AS SHALLOW AS 12" IF THE CAPPING FILL SYSTEM IS USED.

COUNTY OF NEVADA
 DEPARTMENT OF
 ENVIRONMENTAL HEALTH

PRESSURIZED
 DISTRIBUTION SYSTEM

DIAGRAM 13 – DOSING/PUMP TANK

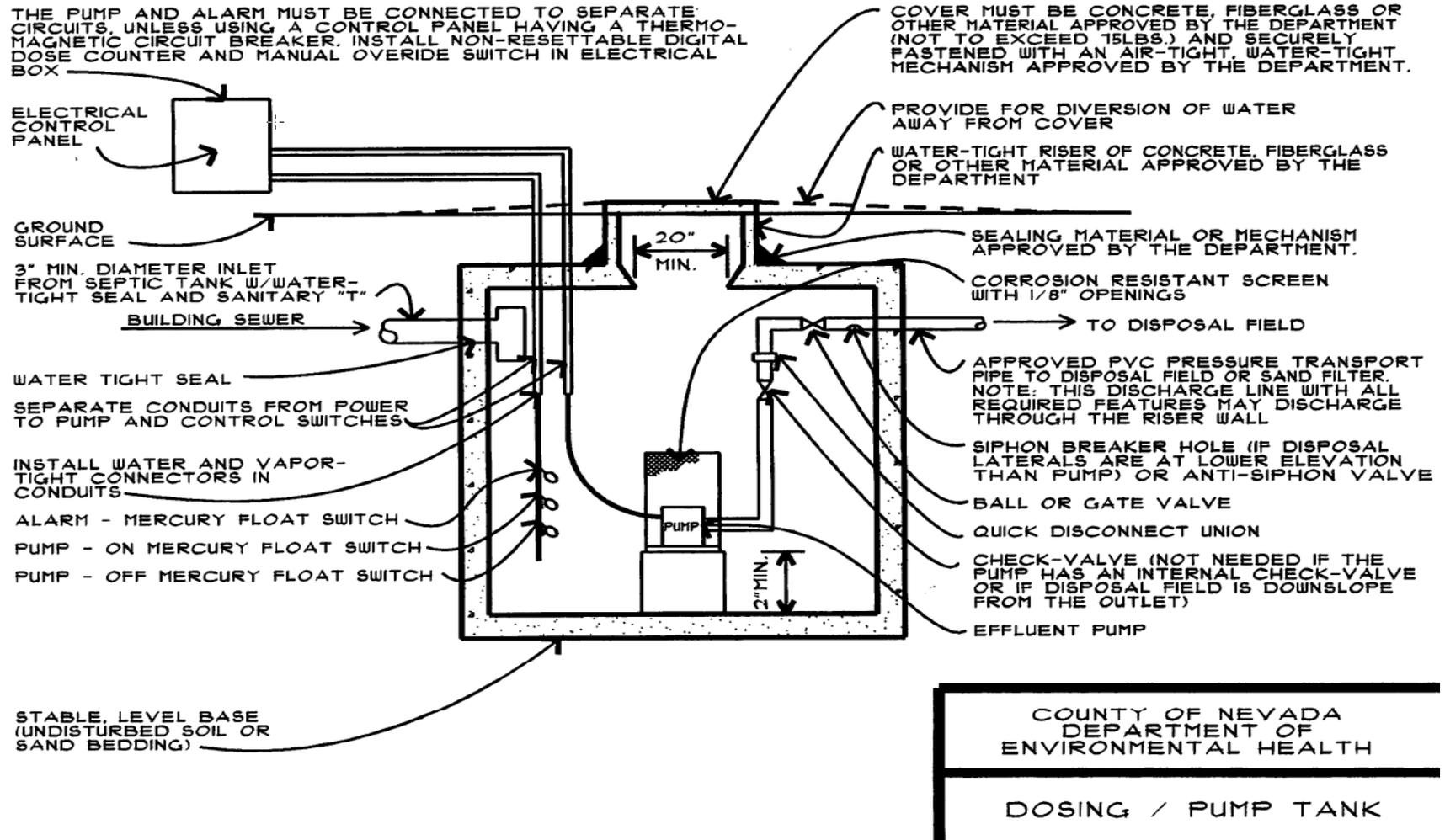
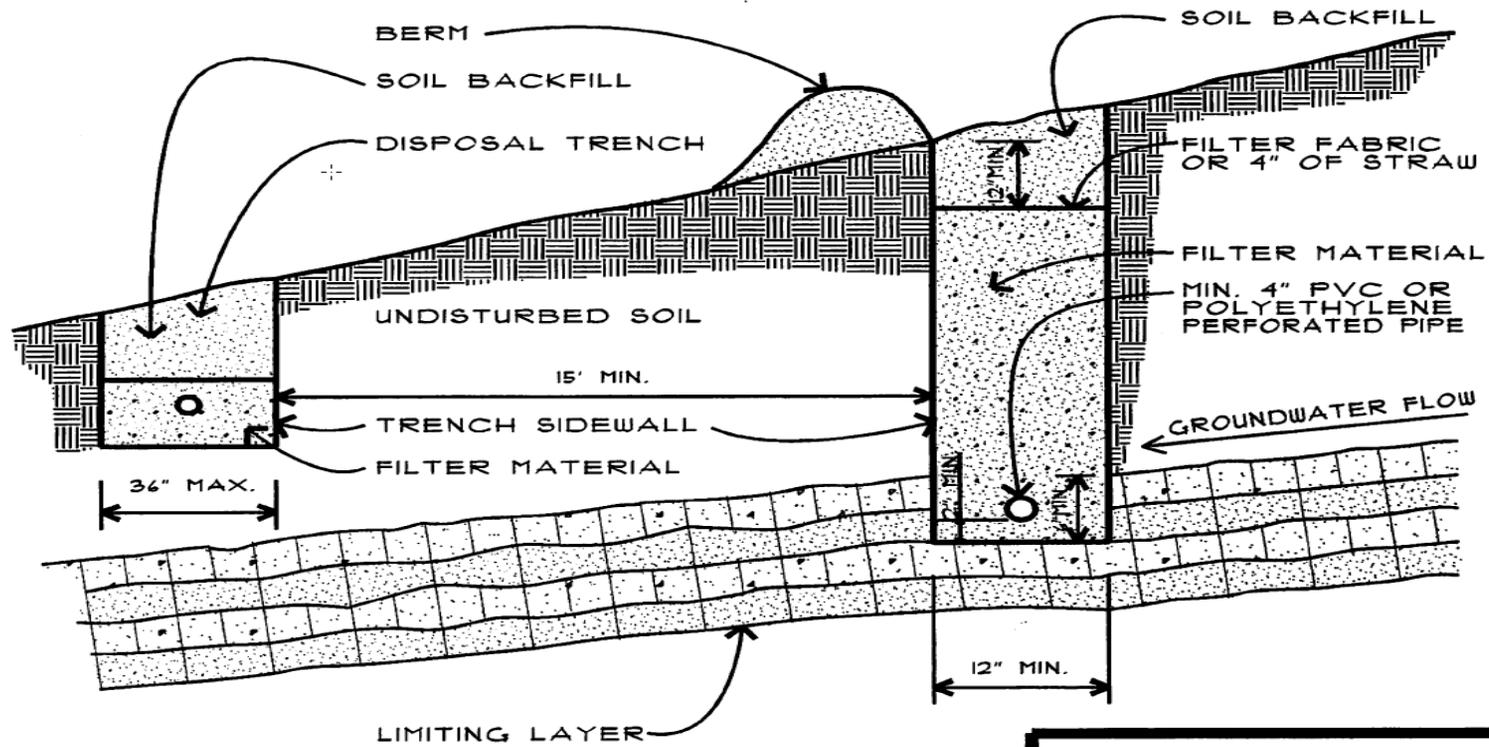
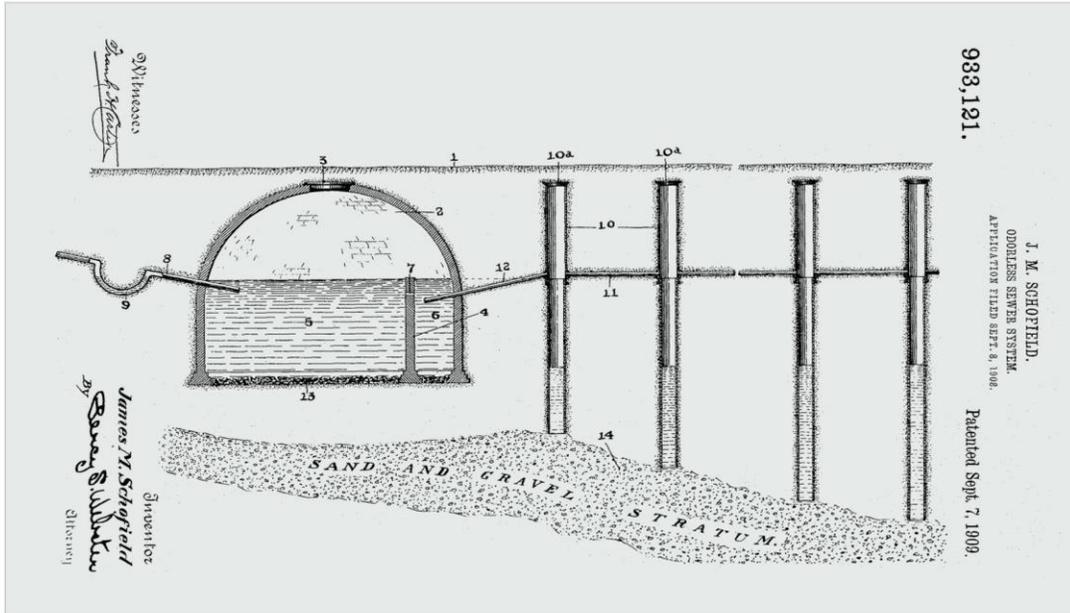


DIAGRAM 14 – TYPICAL CURTAIN DRAIN



NOTE:
CURTAIN DRAIN DEPTH VARIES WITH
DESIGN AND VOLUME OF GROUNDWATER

COUNTY OF NEVADA
DEPARTMENT OF
ENVIRONMENTAL HEALTH
TYPICAL CURTAIN DRAIN



933,121.

J. M. SCHOFIELD.
ODORLESS SEWER SYSTEM.
APPLICATION FILED SEPT. 8, 1902.

Patented Sept. 7, 1909.

W. H. H. H.
W. H. H. H.

James M. Schofield
by *Samuel S. Sullivan*
Attorney

OWTS POLICY

Water Quality Control Policy for Siting,
Design, Operation, and Maintenance of
Onsite Wastewater Treatment Systems

June 19, 2012



STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS



State of California
Edmund G. Brown Jr., Governor



California Environmental Protection Agency
Matthew Rodriguez, Secretary



State Water Resources Control Board
<http://www.waterboards.ca.gov>

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Frances Spivy-Weber, Vice Chair
Tam M. Doduc, Member
Steven Moore, Member

Thomas Howard, Executive Director
Jonathan Bishop, Chief Deputy Director
Caren Trgovcich, Chief Deputy Director

Adopted by the State Water Resources Control Board on June 19, 2012
Approved by the Office of Administrative Law on November 13, 2012
Effective Date of the Policy: May 13, 2013

Preamble – Purpose and Scope – Structure of the Policy

Preamble

Onsite wastewater treatment systems (OWTS) are useful and necessary structures that allow habitation at locations that are removed from centralized wastewater treatment systems. When properly sited, designed, operated, and maintained, OWTS treat domestic wastewater to reduce its polluting impact on the environment and most importantly protect public health. Estimates for the number of installations of OWTS in California at the time of this Policy are that more than 1.2 million systems are installed and operating. The vast majority of these are functioning in a satisfactory manner and meeting their intended purpose.

However there have been occasions in California where OWTS for a varied list of reasons have not satisfactorily protected either water quality or public health. Some instances of these failures are related to the OWTS not being able to adequately treat and dispose of waste as a result of poor design or improper site conditions. Others have occurred where the systems are operating as designed but their densities are such that the combined effluent resulting from multiple systems is more than can be assimilated into the environment. From these failures we must learn how to improve our usage of OWTS and prevent such failures from happening again.

As California's population continues to grow, and we see both increased rural housing densities and the building of residences and other structures in more varied terrain than we ever have before, we increase the risks of causing environmental damage and creating public health risks from the use of OWTS. What may have been effective in the past may not continue to be as conditions and circumstances surrounding particular locations change. So necessarily more scrutiny of our installation of OWTS is demanded of all those involved, while maintaining an appropriate balance of only the necessary requirements so that the use of OWTS remains viable.

Purpose and Scope of the Policy

The purpose of this Policy is to allow the continued use of OWTS, while protecting water quality and public health. This Policy recognizes that responsible local agencies can provide the most effective means to manage OWTS on a routine basis. Therefore as an important element, it is the intent of this policy to efficiently utilize and improve upon where necessary existing local programs through coordination between the State and local agencies. To accomplish this purpose, this 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. In particular, the Policy requires actions for water bodies specifically identified as part this Policy where OWTS contribute to water quality degradation that adversely affect beneficial uses.

This Policy only authorizes subsurface disposal of domestic strength, and in limited instances high strength, wastewater and establishes minimum requirements for the permitting, monitoring, and operation of OWTS for protecting beneficial uses of waters

Preamble – Purpose and Scope – Structure of the Policy

of the State and preventing or correcting conditions of pollution and nuisance. And finally, this Policy also conditionally waives the requirement for owners of OWTS to apply for and receive Waste Discharge Requirements in order to operate their systems when they meet the conditions set forth in the Policy. Nothing in this Policy supersedes or requires modification of Total Maximum Daily Loads or Basin Plan prohibitions of discharges from OWTS.

This Policy also applies to OWTS on federal, state, and Tribal lands to the extent authorized by law or agreement.

Structure of the Policy

This Policy is structured into ten major parts:

Definitions

Definitions for all the major terms used in this Policy are provided within this part and wherever used in the Policy the definition given here overrides any other possible definition.

[\[Section 1\]](#)

Responsibilities and Duties

Implementation of this Policy involves individual OWTS owners; local agencies, be they counties, cities, or any other subdivision of state government with permitting powers over OWTS; Regional Water Quality Control Boards; and the State Water Resources Control Board.

[\[Sections 2, 3, 4, and 5\]](#)

Tier 0 – Existing OWTS

Existing OWTS that are properly functioning, and do not meet the conditions of failing systems or otherwise require corrective action (for example, to prevent groundwater impairment) as specifically described in Tier 4, and are not determined to be contributing to an impairment of surface water as specifically described in Tier 3, are automatically included in Tier 0.

[\[Section 6\]](#)

Tier 1 – Low-Risk New or Replacement OWTS

New or replacement OWTS that meet low risk siting and design requirements as specified in Tier 1, where there is not an approved Local Agency Management Plan per Tier 2.

[\[Sections 7 and 8\]](#)

Tier 2 – Local Agency Management Plan for New or Replacement OWTS California is well known for its extreme range of geological and climatic conditions. As such, the establishment of a single set of criteria for OWTS would either be too restrictive so as to protect for the most sensitive case, or would have broad allowances that would not be protective enough under some circumstances. To accommodate this

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extreme variance, local agencies may submit management programs (“Local Agency Management Plans”) for approval, and upon approval then manage the installation of new and replacement OWTS under that program.

Local Agency Management Plans approved under Tier 2 provide an alternate method from Tier 1 programs to achieve the same policy purpose, which is to protect water quality and public health. In order to address local conditions, Local Agency Management Plans may include standards that differ from the Tier 1 requirements for new and replacement OWTS contained in Sections 7 and 8. As examples, a Local Agency Management Plan may authorize different soil characteristics, usage of seepage pits, and different densities for new developments. Once the Local Agency Management Plan is approved, new and replacement OWTS that are included within the Local Agency Management Plan may be approved by the Local Agency. A Local Agency, at its discretion, may include Tier 1 standards within its Tier 2 Local Agency Management Plan for some or all of its jurisdiction. However, once a Local Agency Management Plan is approved, it shall supersede Tier 1 and all future OWTS decisions will be governed by the Tier 2 Local Agency Management Plan until it is modified, withdrawn, or revoked.

[\[Section 9\]](#)

Tier 3 – Impaired Areas

Existing, new, and replacement OWTS that are near impaired water bodies may be addressed by a TMDL and its implementation program, or special provisions contained in a Local Agency Management Plan. If there is no TMDL or special provisions, new or replacement OWTS within 600 feet of impaired water bodies listed in Attachment 2 must meet the specific requirements of Tier 3.

[\[Section 10\]](#)

Tier 4 – OWTS Requiring Corrective Action

OWTS that require corrective action or are either presently failing or fail at any time while this Policy is in effect are automatically included in Tier 4 and must follow the requirements as specified.

[\[Section 11\]](#)

Conditional Waiver of Waste Discharge Requirements

The requirement to submit a report of waste discharge for discharges from OWTS that are in conformance with this policy is waived.

[\[Section 12\]](#)

Effective Date

When this Policy becomes effective.

[\[Section 13\]](#)

Financial Assistance

Procedures for local agencies to apply for funds to establish low interest loan programs for the assistance of OWTS owners in meeting the requirements of this Policy.

[\[Section 14\]](#)

Preamble – Purpose and Scope – Structure of the Policy

[Attachment 1](#)

AB 885 Regulatory Program Timelines.

[Attachment 2](#)

Tables 4 and 5 specifically identify those impaired water bodies that have Tier 3 requirements and must have a completed TMDL by the date specified.

[Attachment 3](#)

Table 6 shows where one Regional Water Board has been designated to review and, if appropriate, approve new Local Agency Management Plans for a local agency that is within multiple Regional Water Boards' jurisdiction.

What Tier Applies to my OWTS?

Existing OWTS that conform to the requirements for Tier 0 will remain in Tier 0 as long as they continue to meet those requirements. An existing OWTS will temporarily move from Tier 0 to Tier 4 if it is determined that corrective action is needed. The existing OWTS will return to Tier 0 once the corrective action is completed if the repair does not qualify as major repair under Tier 4. Any major repairs conducted as corrective action must comply with Tier 1 requirements or Tier 2 requirements, whichever are in effect for that local area. An existing OWTS will move from Tier 0 to Tier 3 if it is adjacent to an impaired water body listed on Attachment 2, or is covered by a TMDL implementation plan.

In areas with no approved Local Agency Management Plan, new and replacement OWTS that conform to the requirements of Tier 1 will remain in Tier 1 as long as they continue to meet those requirements. A new or replacement OWTS will temporarily move from Tier 1 to Tier 4 if it is determined that corrective action is needed. The new or replacement OWTS will return to Tier 1 once the corrective action is completed. A new or replacement OWTS will move from Tier 1 to Tier 3 if it is adjacent to an impaired water body, or is covered by a TMDL implementation plan.

In areas with an approved Local Agency Management Plan, new and replacement OWTS that conform to the requirements of the Tier 2 Local Agency Management Plan will remain in Tier 2 as long as they continue to meet those requirements. A new or replacement OWTS will temporarily move from Tier 2 to Tier 4 if it is determined that corrective action is needed. The new or replacement OWTS will return to Tier 2 once the corrective action is completed. A new or replacement OWTS will move from Tier 2 to Tier 3 if it is adjacent to an impaired water body, or is covered by a TMDL implementation plan, or is covered by special provisions for impaired water bodies contained in a Local Agency Management Plan.

Preamble – Purpose and Scope – Structure of the Policy

Existing, new, and replacement OWTS in specified areas adjacent to water bodies that are identified by the State Water Board as impaired for pathogens or nitrogen and listed in Attachment 2 are in Tier 3. Existing, new, and replacement OWTS covered by a TMDL implementation plan, or covered by special provisions for impaired water bodies contained in a Local Agency Management Plan are also in Tier 3. These OWTS will temporarily move from Tier 3 to Tier 4 if it is determined that corrective action is needed. The new or replacement OWTS will return to Tier 3 once the corrective action is completed.

Existing, new, and replacement OWTS that do not conform with the requirements to receive coverage under any of the Tiers (e.g., existing OWTS with a projected flow of more than 10,000 gpd) do not qualify for this Policy's conditional waiver of waste discharge requirements, and will be regulated separately by the applicable Regional Water Board.

Definitions

1.1 Definitions. The following definitions apply to this Policy:

“**303 (d) list**” means the same as “**Impaired Water Bodies.**”

“**At-grade system**” means an OWTS dispersal system with a discharge point located at the preconstruction grade (ground surface elevation). The discharge from an at-grade system is always subsurface.

“**Average annual rainfall**” means the average of the annual amount of precipitation for a location over a year as measured by the nearest National Weather Service station for the preceding three decades. For example the data set used to make a determination in 2012 would be the data from 1981 to 2010.

“**Basin Plan**” means the same as “water quality control plan” as defined in Division 7 (commencing with Section 13000) of the Water Code. Basin Plans are adopted by each Regional Water Board, approved by the State Water Board and the Office of Administrative Law, and identify surface water and groundwater bodies within each Region’s boundaries and establish, for each, its respective beneficial uses and water quality objectives. Copies are available from the Regional Water Boards, electronically at each Regional Water Boards website, or at the State Water Board’s *Plans and Policies* web page (http://www.waterboards.ca.gov/plans_policies/).

“**Bedrock**” means the rock, usually solid, that underlies soil or other unconsolidated, surficial material.

“**CEDEN**” means California Environmental Data Exchange Network and information about it is available at the State Water Boards website or <http://www.ceden.org/index.shtml>.

“**Cesspool**” means an excavation in the ground receiving domestic wastewater, designed to retain the organic matter and solids, while allowing the liquids to seep into the soil. Cesspools differ from seepage pits because cesspool systems do not have septic tanks and are not authorized under this Policy. The term cesspool does not include pit-privies and out-houses which are not regulated under this Policy.

“**Clay**” means a soil particle; the term also refers to a type of soil texture. As a soil particle, clay consists of individual rock or mineral particles in soils having diameters <0.002 mm. As a soil texture, clay is the soil material that is comprised of 40 percent or more clay particles, not more than 45 percent sand and not more than 40 percent silt particles using the USDA soil classification system.

“**Cobbles**” means rock fragments 76 mm or larger using the USDA soil classification systems.

“**Dispersal system**” means a leachfield, seepage pit, mound, at-grade, subsurface drip field, evapotranspiration and infiltration bed, or other type of system for final wastewater treatment and subsurface discharge.

Definitions

“Domestic wastewater” means wastewater with a measured strength less than high-strength wastewater and is the type of wastewater normally discharged from, or similar to, that discharged from plumbing fixtures, appliances and other household devices including, but not limited to toilets, bathtubs, showers, laundry facilities, dishwashing facilities, and garbage disposals. Domestic wastewater may include wastewater from commercial buildings such as office buildings, retail stores, and some restaurants, or from industrial facilities where the domestic wastewater is segregated from the industrial wastewater. Domestic wastewater may include incidental RV holding tank dumping but does not include wastewater consisting of a significant portion of RV holding tank wastewater such as at RV dump stations. Domestic wastewater does not include wastewater from industrial processes.

“Dump Station” means a facility intended to receive the discharge of wastewater from a holding tank installed on a recreational vehicle. A dump station does not include a full hook-up sewer connection similar to those used at a recreational vehicle park.

“Domestic well” means a groundwater well that provides water for human consumption and is not regulated by the California Department of Public Health.

“Earthen material” means a substance composed of the earth’s crust (i.e. soil and rock).

“EDF” see “electronic deliverable format.”

“Effluent” means sewage, water, or other liquid, partially or completely treated or in its natural state, flowing out of a septic tank, aerobic treatment unit, dispersal system, or other OWTS component.

“Electronic deliverable format” or **“EDF”** means the data standard adopted by the State Water Board for submittal of groundwater quality monitoring data to the State Water Board’s internet-accessible database system Geotracker (<http://geotracker.waterboards.ca.gov/>).

“Escherichia coli” means a group of bacteria predominantly inhabiting the intestines of humans or other warm-blooded animals, but also occasionally found elsewhere. Used as an indicator of human fecal contamination.

“Existing OWTS” means an OWTS that was constructed and operating prior to the effective date of this Policy, and OWTS for which a construction permit has been issued prior to the effective date of the Policy.

“Flowing water body” means a body of running water flowing over the earth in a natural water course, where the movement of the water is readily discernible or if water is not present it is apparent from review of the geology that when present it does flow, such as in an ephemeral drainage, creek, stream, or river.

“Groundwater” means water below the land surface that is at or above atmospheric pressure.

Definitions

“High-strength wastewater” means wastewater having a 30-day average concentration of biochemical oxygen demand (BOD) greater than 300 milligrams-per-liter (mg/L) or of total suspended solids (TSS) greater than 330 mg/L or a fats, oil, and grease (FOG) concentration greater than 100 mg/L prior to the septic tank or other OWTS treatment component.

“IAPMO” means the International Association of Plumbing and Mechanical Officials.

“Impaired Water Bodies” means those surface water bodies or segments thereof that are identified on a list approved first by the State Water Board and then approved by US EPA pursuant to Section 303(d) of the federal Clean Water Act.

“Local agency” means any subdivision of state government that has responsibility for permitting the installation of and regulating OWTS within its jurisdictional boundaries; typically a county, city, or special district.

“Major repair” means either: (1) for a dispersal system, repairs required for an OWTS dispersal system due to surfacing wastewater effluent from the dispersal field and/or wastewater backed up into plumbing fixtures because the dispersal system is not able to percolate the design flow of wastewater associated with the structure served, or (2) for a septic tank, repairs required to the tank for a compartment baffle failure or tank structural integrity failure such that either wastewater is exfiltrating or groundwater is infiltrating.

“Mottling” means a soil condition that results from oxidizing or reducing minerals due to soil moisture changes from saturated to unsaturated over time. Mottling is characterized by spots or blotches of different colors or shades of color (grays and reds) interspersed within the dominant color as described by the USDA soil classification system. This soil condition can be indicative of historic seasonal high groundwater level, but the lack of this condition may not demonstrate the absence of groundwater.

“Mound system” means an aboveground dispersal system (covered sand bed with effluent leachfield elevated above original ground surface inside) used to enhance soil treatment, dispersal, and absorption of effluent discharged from an OWTS treatment unit such as a septic tank. Mound systems have a subsurface discharge.

“New OWTS” means an OWTS permitted after the effective date of this Policy.

“NSF” means NSF International (a.k.a. National Sanitation Foundation), a not for profit, non-governmental organization that develops health and safety standards and performs product certification.

“Oil/grease interceptor” means a passive interceptor that has a rate of flow exceeding 50 gallons-per-minute and that is located outside a building. Oil/grease interceptors are used for separating and collecting oil and grease from wastewater.

Definitions

“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. The short form of the term may be singular or plural. OWTS do not include “graywater” systems pursuant to Health and Safety Code Section 17922.12.

“Percolation test” means a method of testing water absorption of the soil. The test is conducted with clean water and test results can be used to establish the dispersal system design.

“Permit” means a document issued by a local agency that allows the installation and use of an OWTS, or waste discharge requirements or a waiver of waste discharge requirements that authorizes discharges from an OWTS.

“Person” means any individual, firm, association, organization, partnership, business trust, corporation, company, State agency or department, or unit of local government who is, or that is, subject to this Policy.

“Pit-privy” (a.k.a. outhouse, pit-toilet) means self-contained waterless toilet used for disposal of non-water carried human waste; consists of a shelter built above a pit in the ground into which human waste falls.

“Policy” means this Policy for Siting, Design, Operation and Management of OWTS.

“Pollutant” means any substance that alters water quality of the waters of the State to a degree that it may potentially affect the beneficial uses of water, as listed in a Basin Plan.

“Projected flows” means wastewater flows into the OWTS determined in accordance with any of the applicable methods for determining average daily flow in the *USEPA Onsite Wastewater Treatment System Manual, 2002*, or for Tier 2 in accordance with an approved Local Agency Management Plan.

“Public Water System” is a water system regulated by the California Department of Public Health or a Local Primacy Agency pursuant to Chapter 12, Part 4, California Safe Drinking Water Act, Section 116275 (h) of the California Health and Safety Code.

“Public Water Well” is a ground water well serving a public water system. A spring which is not subject to the California Surface Water Treatment Rule (SWTR), CCR, Title 22, sections 64650 through 64666 is a public well.

“Qualified professional” means an individual licensed or certified by a State of California agency to design OWTS and practice as professionals for other associated reports, 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 professional geologist. For the purposes of performing site evaluations, Soil Scientists certified by the Soil Science Society of America are considered qualified professionals. A local agency may modify this definition as part of its Local Agency Management Plan.

Definitions

“Regional Water Board” is any of the Regional Water Quality Control Boards designated by Water Code Section 13200. Any reference to an action of the Regional Water Board in this Policy also refers to an action of its Executive Officer, including the conducting of public hearings, pursuant to any general or specific delegation under Water Code Section 13223.

“Replacement OWTS” means an OWTS that has its treatment capacity expanded, or its dispersal system replaced or added onto, after the effective date of this Policy.

“Sand” means a soil particle; this term also refers to a type of soil texture. As a soil particle, sand consists of individual rock or mineral particles in soils having diameters ranging from 0.05 to 2.0 millimeters. As a soil texture, sand is soil that is comprised of 85 percent or more sand particles, with the percentage of silt plus 1.5 times the percentage of clay particles comprising less than 15 percent.

“Seepage pit” means a drilled or dug excavation, three to six feet in diameter, either lined or gravel filled, that receives the effluent discharge from a septic tank or other OWTS treatment unit for dispersal.

“Septic tank” means a watertight, covered receptacle designed for primary treatment of wastewater and constructed to:

1. Receive wastewater discharged from a building;
2. Separate settleable and floating solids from the liquid;
3. Digest organic matter by anaerobic bacterial action;
4. Store digested solids; and
5. Clarify wastewater for further treatment with final subsurface discharge.

“Service provider” means a person capable of operating, monitoring, and maintaining an OWTS in accordance to this Policy.

“Silt” means a soil particle; this term also refers to a type of soil texture. As a soil particle, silt consists of individual rock or mineral particles in soils having diameters ranging from between 0.05 and 0.002 mm. As a soil texture, silt is soil that is comprised as approximately 80 percent or more silt particles and not more than 12 percent clay particles using the USDA soil classification system.

“Single-family dwelling unit” means a structure that is usually occupied by just one household or family and for the purposes of this Policy is expected to generate an average of 250 gallons per day of wastewater.

“Site” means the location of the OWTS and, where applicable, a reserve dispersal area capable of disposing 100 percent of the design flow from all sources the OWTS is intended to serve.

“Site Evaluation” means an assessment of the characteristics of the site sufficient to determine its suitability for an OWTS to meet the requirements of this Policy.

Definitions

- “Soil”** means the naturally occurring body of porous mineral and organic materials on the land surface, which is composed of unconsolidated materials, including sand-sized, silt-sized, and clay-sized particles mixed with varying amounts of larger fragments and organic material. The various combinations of particles differentiate specific soil textures identified in the soil textural triangle developed by the United States Department of Agriculture (USDA) as found in Soil Survey Staff, USDA; *Soil Survey Manual, Handbook 18*, U.S. Government Printing Office, Washington, DC, 1993, p. 138. For the purposes of this Policy, soil shall contain earthen material of particles smaller than 0.08 inches (2 mm) in size.
- “Soil Structure”** means the arrangement of primary soil particles into compound particles, peds, or clusters that are separated by natural planes of weakness from adjoining aggregates.
- “Soil texture”** means the soil class that describes the relative amount of sand, clay, silt and combinations thereof as defined by the classes of the soil textural triangle developed by the USDA (referenced above).
- “State Water Board”** is the State Water Resources Control Board
- “Supplemental treatment”** means any OWTS or component of an OWTS, except a septic tank or dosing tank, that performs additional wastewater treatment so that the effluent meets a predetermined performance requirement prior to discharge of effluent into the dispersal field.
- “SWAMP”** means Surface Water Ambient Monitoring Program and more information is available at: http://www.waterboards.ca.gov/water_issues/programs/swamp/
- “Telemetric”** means the ability to automatically measure and transmit OWTS data by wire, radio, or other means.
- “TMDL”** is the acronym for "total maximum daily load." Section 303(d)(1) of the Clean Water Act requires each State to establish a TMDL for each impaired water body to address the pollutant(s) causing the impairment. In California, TMDLs are usually adopted as Basin Plan amendments and contain implementation plans detailing how water quality standards will be attained.
- “Total coliform”** means a group of bacteria consisting of several *genera* belonging to the family *Enterobacteriaceae*, which includes *Escherichia coli* bacteria.
- “USDA”** means the U.S. Department of Agriculture.
- “Waste discharge requirement”** or **“WDR”** means an operation and discharge permit issued for the discharge of waste pursuant to Section 13260 of the California Water Code.

Responsibilities and Duties

Responsibilities and Duties

2.0 OWTS Owners Responsibilities and Duties

- 2.1 All new, replacement, or existing OWTS within an area that is subject to a Basin Plan prohibition of discharges from OWTS, must comply with the prohibition. If the prohibition authorizes discharges under specified conditions, the discharge must comply with those conditions and the applicable provisions of this Policy.
- 2.2 Owners of OWTS shall adhere to the requirements prescribed in local codes and ordinances. Owners of new and replacement OWTS covered by this Policy shall also meet the minimum standards contained in Tier 1, or an alternate standard provided by a Local Agency Management Plan per Tier 2, or shall comply with the requirements of Tier 3 if near an impaired water body and subject to Tier 3, or shall provide corrective action for their OWTS if their system meets conditions that place it in Tier 4.
- 2.3 Owners of OWTS shall comply with any and all permitting conditions imposed by a local agency that do not directly conflict with this Policy, including any conditions that are more stringent than required by this Policy.
- 2.4 To receive coverage under this Policy and the included waiver of waste discharges, OWTS shall only accept and treat flows of domestic wastewater. In addition, OWTS that accept high-strength wastewater from commercial food service buildings are covered under this Policy and the waiver of waste discharge requirements if the wastewater does not exceed 900 mg/L BOD and there is a properly sized and functioning oil/grease interceptor (a.k.a grease trap).
- 2.5 Owners of OWTS shall maintain their OWTS in good working condition including inspections and pumping of solids as necessary, or as required by local ordinances, to maintain proper function and assure adequate treatment.
- 2.6 The following owners of OWTS shall notify the Regional Water Board by submitting a Report of Waste Discharge for the following:
 - 2.6.1 a new or replacement OWTS that does not meet the conditions and requirements set forth in either a Local Agency Management Plan if one is approved, an existing local program if it is less than 60 months from the effective date of the Policy and a Local Agency Management Plan is not yet approved, or Tier 1 if no Local Agency Management Plan has been approved and it is more than 60 months after the effective date of this Policy;
 - 2.6.2 any OWTS, not under individual waste discharge requirements or a waiver of individual waste discharge requirements issued by a Regional Water Board, with the projected flow of over 10,000 gallons-per-day;

Responsibilities and Duties

- 2.6.3 any OWTS that receives high-strength wastewater, unless the waste stream is from a commercial food service building;
- 2.6.4 any OWTS that receives high-strength wastewater from a commercial food service building: (1) with a BOD higher than 900 mg/L, or (2) that does not have a properly sized and functioning oil/grease interceptor.
- 2.7 All Reports of Waste Discharge shall be accompanied by the required application fee pursuant to California Code of Regulations, title 23, section 2200.

3.0 Local Agency Requirements and Responsibilities

- 3.1 Local agencies, in addition to implementing their own local codes and ordinances, shall determine whether the requirements within their local jurisdiction will be limited to the water quality protection afforded by the statewide minimum standards in Tier 0, Tier 1, Tier 3, and Tier 4, or whether the local agency will implement a Local Agency Management Plan in accordance with Tier 2. Except for Tier 3, local agencies may continue to implement their existing OWTS permitting programs in compliance with the Basin Plan in place at the effective date of the Policy until 60 months after the effective date of this Policy, or approval of a Local Agency Management Plan, whichever comes first, and may make minor adjustments as necessary that are in compliance with the applicable Basin Plan and this Policy. Tier 3 requirements take effect on the effective date of this Policy. In the absence of a Tier 2 Local Agency Management Plan, to the extent that there is a direct conflict between the applicable minimum standards and the local codes or ordinances (such that it is impossible to comply with both the applicable minimum standards and the local ordinances or codes), the more restrictive standards shall govern.
- 3.2 If preferred, the local agency may at any time provide the State Water Board and all affected Regional Water Board(s) written notice of its intent to regulate OWTS using a Local Agency Management Plan with alternative standards as authorized in Tier 2 of this Policy. A proposed Local Agency Management Plan that conforms to the requirements of that Section shall be included with the notice. A local agency shall not implement a program different than the minimum standards contained in Tier 1 and 3 of this Policy after 60 months from the effective date of this Policy until approval of the proposed Local Agency Management Plan is granted by either the Regional Water Board or State Water Board. All initial program submittals desiring approval prior to the 60 month limit shall be received no later than 36 months from the effective date of this Policy. Once approved, the local agency shall adhere to the Local Agency Management Plan, including all requirements, monitoring, and reporting. If at any time a local agency wishes to modify its Local Agency Management Plan, it shall provide the State Water Board and all affected Regional Water Board(s) written notice of its intended modifications and will continue to implement its existing Local Agency Management Plan until the modifications are approved.

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- 3.3 All local agencies permitting OWTS shall report annually to the Regional Water Board(s). If a local agency's jurisdictional area is within the boundary of multiple Regional Water Boards, the local agency shall send a copy of the annual report to each Regional Water Board. The annual report shall include the following information (organized in a tabular spreadsheet format) and summarize whether any further actions are warranted to protect water quality or public health:
 - 3.3.1 number and location of complaints pertaining to OWTS operation and maintenance, and identification of those which were investigated and how they were resolved;
 - 3.3.2 shall provide the applications and registrations issued as part of the local septic tank cleaning registration program pursuant to Section 117400 et seq. of the California Health and Safety Code;
 - 3.3.3 number, location, and description of permits issued for new and replacement OWTS and which Tier the permit is issued.
- 3.4 All local agencies permitting OWTS shall retain permanent records of their permitting actions and will make those records available within 10 working days upon written request for review by a Regional Water Board. The records for each permit shall reference the Tier under which the permit was issued.
- 3.5 A local agency shall notify the owner of a public well or water intake and the California Department of Public Health as soon as practicable, but not later than 72 hours, upon its discovery of a failing OWTS as described in sections 11.1 and 11.2 within the setbacks described in sections 7.5.6 through 7.5.10.
- 3.6 A local agency may implement this Policy, or a portion thereof, using its local authority to enforce the policy, as authorized by an approval from the State Water Board or by the appropriate Regional Water Board.
- 3.7 Nothing in the Policy shall preclude a local agency from adopting or retaining standards for OWTS in an approved Local Agency Management Plan that are more protective of the public health or the environment than are contained in this Policy.
- 3.8 If at any time a local agency wishes to withdraw its previously submitted and approved Tier 2 Local Agency Management Plan, it may do so upon 60 days written notice. The notice of withdrawal shall specify the reason for withdrawing its Tier 2 program, the effective date for cessation of the program and resumption of permitting of OWTS only under Tiers 1, 3, and 4.

4.0 Regional Water Board Functions and Duties

- 4.1 The Regional Water Boards have the principal responsibility for overseeing the implementation of this Policy.
- 4.2 Regional Water Boards shall incorporate the requirements established in this Policy by amending their Basin Plans within 12 months of the effective date of this Policy, pursuant to Water Code Section 13291(e). The Regional Water

Responsibilities and Duties

Boards may also consider whether it is necessary and appropriate to retain or adopt any more protective standards. To the extent that a Regional Water Board determines that it is necessary and appropriate to retain or adopt any more protective standards, it shall reconcile those region-specific standards with this Policy to the extent feasible, and shall provide a detailed basis for its determination that each of the more protective standards is necessary and appropriate.

- 4.2.1 Notwithstanding 4.2 above, the North Coast Regional Water Board will continue to implement its existing Basin Plan requirements pertaining to OWTS within the Russian River watershed until it adopts the Russian River TMDL, at which time it will comply with section 4.2 for the Russian River watershed.
- 4.3 The Regional Water Board designated in Attachment 3 shall review, and if appropriate, approve a Local Agency Management Plan submitted by the local agency pursuant to Tier 2 in this Policy. Upon receipt of a proposed Local Agency Management Plan, the Regional Water Board designated in Attachment 3 shall have 90 days to notify the local agency whether the submittal contains all the elements of a Tier 2 program, but may request additional information based on review of the proposed program. Approval must follow a noticed hearing with opportunity for public comment. If a Local Agency Management Plan is disapproved, the Regional Water Board designated in Attachment 3 shall provide a written explanation of the reasons for the disapproval. A Regional Water Board may approve a Local Agency Management Plan while disapproving any proposed special provisions for impaired water bodies contained in the Local Agency Management Plan. If no action is taken by the respective Regional Water Board within 12 months of the submission date of a complete Local Agency Management Plan, the program shall be forwarded to the State Water Board for review and approval pursuant to Section 5 of this Policy.
 - 4.3.1 Where the local agency's jurisdiction lies within more than one Regional Water Board, staff from the affected Regional Water Boards shall work cooperatively to assure that water quality protection in each region is adequately protected. If the Regional Water Board designated in Attachment 3 approves the Local Agency Management Plan over the written objection of an affected Regional Water Board, that Regional Water Board may submit the dispute to the State Water Board under Section 5.3.
 - 4.3.2 Within 30 days of receipt of a proposed Local Agency Management Plan, a Regional Water Board will forward a copy to and solicit comments from the California Department of Public Health regarding a Local Agency Management Plan's proposed policies and procedures, including notification to local water purveyors prior to OWTS permitting.
- 4.4 Once a Local Agency Management Plan has been approved, any affected Regional Water Board may require modifications or revoke authorization of a local agency to implement a Tier 2 program, in accordance with the following:

Responsibilities and Duties

- 4.4.1 The Regional Water Board shall consult with any other Regional Water Board(s) having jurisdiction over the local agency before providing the notice described in section 4.4.2.
- 4.4.2 Written notice shall be provided to the local agency detailing the Regional Water Board's action, the cause for such action, remedies to prevent the action from continuing to completion, and appeal process and rights. The local agency shall have 90 days from the date of the written notice to respond with a corrective action plan to address the areas of non-compliance, or to request the Regional Water Board to reconsider its findings.
- 4.4.3 The Regional Water Board shall approve, approve conditionally, or deny a corrective action plan within 90 days of receipt. The local agency will have 90 days to begin implementation of a corrective action plan from the date of approval or 60 days to request reconsideration from the date of denial. If the local agency fails to submit an acceptable corrective action plan, fails to implement an approved corrective action plan, or request reconsideration, the Regional Water Board may require modifications to the Local Agency Management Plan, or may revoke the local agency's authorization to implement a Tier 2 program.
- 4.4.4 Requests for reconsideration by the local agency shall be decided by the Regional Water Board within 90 days and the previously approved Local Agency Management Plan shall remain in effect while the reconsideration is pending.
- 4.4.5 If the request for reconsideration is denied, the local agency may appeal to the State Water Board and the previously approved Local Agency Management Plan shall remain in effect while the appeal is under consideration. The State Water Board shall decide the appeal within 90 days. All decisions of the State Water Board are final.
- 4.5 The appropriate Regional Water Board shall accept and consider any requests for modification or revocation of a Local Agency Management Plan submitted by any person. The Regional Water Board will notify the person making the request and the local agency implementing the Local Agency Management Plan at issue by letter within 90 days whether it intends to proceed with the modification or revocation process per Section 4.4 above, or is dismissing the request. The Regional Water Board will post the request and its response letter on its website.
- 4.6 A Regional Water Board may issue or deny waste discharge requirements or waivers of waste discharge requirements for any new or replacement OWTS within a jurisdiction of a local agency without an approved Local Agency Management Plan if that OWTS does not meet the minimum standards contained in Tier 1.
- 4.7 The Regional Water Boards will implement any notifications and enforcement requirements for OWTS determined to be in Tier 3 of this Policy.

Responsibilities and Duties

- 4.8 Regional Water Boards may adopt waste discharge requirements, or conditional waivers of waste discharge requirements, that exempt individual OWTS from requirements contained in this Policy.

5.0 State Water Board Functions and Duties

- 5.1 As the state agency charged with the development and adoption of this Policy, the State Water Board shall periodically review, amend and/or update this Policy as required.
- 5.2 The State Water Board may take any action assigned to the Regional Water Boards in this Policy.
- 5.3 The State Water Board shall resolve disputes between Regional Water Boards and local agencies as needed within 12 months of receiving such a request by a Regional Water Board or local agency, and may take action on its own motion in furtherance of this Policy. As part of this function, the State Water Board shall review and, if appropriate, approve Local Agency Management Plans in cases where the respective Regional Water Board has failed to consider for approval a Local Agency Management Plan. The State Water Board shall approve Local Agency Management Plans at a regularly noticed board hearing and shall provide for public participation, including notice and opportunity for public comment. Once taken up by the State Water Board, Local Agency Management Plans shall be approved or denied within 180 days.
- 5.4 A member of the public may request the State Water Board to resolve any dispute regarding the Regional Water Board's approval of a Local Agency Management Plan if the member of the public timely raised the disputed issue before the Regional Water Board. Such requests shall be submitted within 30 days after the Regional Water Board's approval of the Local Agency Management Plan. The State Water Board shall notify the member of the public, the local agency, and the Regional Water Board within 90 days whether it intends to proceed with dispute resolution.
- 5.5 The State Water Board shall accept and consider any requests for modification or revocation of a Local Agency Management Plan submitted by any person, where that person has previously submitted said request to the Regional Water Board and has received notice from the Regional Water Board of its dismissal of the request. The State Water Board will notify the person making the request and the local agency implementing the Local Agency Management Plan at issue by letter within 90 days whether it intends to proceed with the modification or revocation process per Section 4.4 above, or is dismissing the request. The State Water Board will post the request and its response letter on its website.
- 5.6 The State Water Board or its Executive Director, after approving any Impaired Water Bodies [303 (d)] List, and for the purpose of implementing Tier 3 of this Policy, shall update Attachment 2 to identify those water bodies where: (1) it is likely that operating OWTS will subsequently be determined to be a contributing

Responsibilities and Duties

source of pathogens or nitrogen and therefore it is anticipated that OWTS would receive a loading reduction, and (2) it is likely that new OWTS installations discharging within 600 feet of the water body would contribute to the impairment. This identification shall be based on information available at the time of 303 (d) listing and may be further updated based on new information. Updates to Attachment 2 will be processed as amendments to this Policy.

- 5.7 The State Water Board will make available to local agencies funds from its Clean Water State Revolving Fund loan program for mini-loan programs to be operated by the local agencies for the making of low interest loans to assist private property owners with complying with this Policy.

Tier 0 – Existing OWTS

Tier 0 – Existing OWTS

Existing OWTS that are properly functioning and do not meet the conditions of failing systems or otherwise require corrective action (for example, to prevent groundwater impairment) as specifically described in Tier 4, and are not determined to be contributing to an impairment of surface water as specifically described in Tier 3, are automatically included in Tier 0.

6.0 Coverage for Properly Operating Existing OWTS

- 6.1 Existing OWTS are automatically covered by Tier 0 and the herein included waiver of waste discharge requirements if they meet the following requirements:
 - 6.1.1 have a projected flow of 10,000 gallons-per-day or less;
 - 6.1.2 receive only domestic wastewater from residential or commercial buildings, or high-strength wastewater from commercial food service buildings that does not exceed 900 mg/L BOD and has a properly sized and functioning oil/grease interceptor (a.k.a. grease trap);
 - 6.1.3 continue to comply with any previously imposed permitting conditions;
 - 6.1.4 do not require supplemental treatment under Tier 3;
 - 6.1.5 do not require corrective action under Tier 4; and
 - 6.1.6 do not consist of a cesspool as a means of wastewater disposal.
- 6.2 A Regional Water Board or local agency may deny coverage under this Policy to any OWTS that is:
 - 6.2.1 Not in compliance with Section 6.1;
 - 6.2.2 Not able to adequately protect the water quality of the waters of the State, as determined by the Regional Water Board after considering any input from the local agency. A Regional Water Board may require the submission of a report of waste discharge to receive Region specific waste discharge requirements or waiver of waste discharge requirements so as to be protective.
- 6.3 Existing OWTS currently under waste discharge requirements or individual waiver of waste discharge requirements will remain under those orders until notified in writing by the appropriate Regional Water Board that they are covered under this Policy.

Tier 1 – Low Risk New or Replacement OWTS

Tier 1 – Low Risk New or Replacement OWTS

New or replacement OWTS meet low risk siting and design requirements as specified in Tier 1, where there is not an approved Local Agency Management Plan per Tier 2.

7.0 Minimum Site Evaluation and Siting Standards

- 7.1 A qualified professional shall perform all necessary soil and site evaluations for all new OWTS and for existing OWTS where the treatment or dispersal system will be replaced or expanded.
- 7.2 A site evaluation shall determine that adequate soil depth is present in the dispersal area. Soil depth is measured vertically to the point where bedrock, hardpan, impermeable soils, or saturated soils are encountered or an adequate depth has been determined. Soil depth shall be determined through the use of soil profile(s) in the dispersal area and the designated dispersal system replacement area, as viewed in excavations exposing the soil profiles in representative areas, unless the local agency has determined through historical or regional information that a specific site soil profile evaluation is unwarranted.
- 7.3 A site evaluation shall determine whether the anticipated highest level of groundwater within the dispersal field and its required minimum dispersal zone is not less than prescribed in Table 2 by estimation using one or a combination of the following methods:
 - 7.3.1 Direct observation of the highest extent of soil mottling observed in the examination of soil profiles, recognizing that soil mottling is not always an indicator of the uppermost extent of high groundwater; or
 - 7.3.2 Direct observation of groundwater levels during the anticipated period of high groundwater. Methods for groundwater monitoring and determinations shall be decided by the local agency; or
 - 7.3.3 Other methods, such as historical records, acceptable to the local agency.
 - 7.3.4 Where a conflict in the above methods of examination exists, the direct observation method indicating the highest level shall govern.
- 7.4 Percolation test results in the effluent disposal area shall not be faster than one minute per inch (1 MPI) or slower than one hundred twenty minutes per inch (120 MPI). All percolation test rates shall be performed by presoaking of percolation test holes and continuing the test until a stabilized rate is achieved.
- 7.5 Minimum horizontal setbacks from any OWTS treatment component and dispersal systems shall be as follows:
 - 7.5.1 5 feet from parcel property lines and structures;
 - 7.5.2 100 feet from water wells and monitoring wells, unless regulatory or legitimate data requirements necessitate that monitoring wells be located closer;

Tier 1 – Low Risk New or Replacement OWTS

- 7.5.3 100 feet from any unstable land mass or any areas subject to earth slides identified by a registered engineer or registered geologist; other setback distance are allowed, if recommended by a geotechnical report prepared by a qualified professional.
- 7.5.4 100 feet from springs and flowing surface water bodies where the edge of that water body is the natural or levied bank for creeks and rivers, or may be less where site conditions prevent migration of wastewater to the water body;
- 7.5.5 200 feet from vernal pools, wetlands, lakes, ponds, or other surface water bodies where the edge of that water body is the high water mark for lakes and reservoirs, and the mean high tide line for tidally influenced water bodies;
- 7.5.6 150 feet from a public water well where the depth of the effluent dispersal system does not exceed 10 feet;
- 7.5.7 Where the effluent dispersal system is within 1,200 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 400 feet from the high water mark of the reservoir, lake or flowing water body.
- 7.5.8 Where the effluent dispersal system is located more than 1,200 feet but less than 2,500 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 200 feet from the high water mark of the reservoir, lake or flowing water body.
- 7.6 Prior to issuing a permit to install an OWTS the permitting agency shall determine if the OWTS is within 1,200 feet of an intake point for a surface water treatment plant for drinking water, is in the drainage catchment in which the intake point is located, and located such that it may impact water quality at the intake point such as being upstream of the intake point for a flowing water body. If the OWTS is within 1,200 feet of an intake point for a surface water treatment plant for drinking water, is in the drainage catchment in which the intake point is located, and is located such that it may impact water quality at the intake point:
 - 7.6.1 The permitting agency shall provide a copy of the permit application to the owner of the water system of their proposal to install an OWTS within 1,200 feet of an intake point for a surface water treatment. If the owner of the water system cannot be identified, then the permitting agency will notify California Department of Public Health Drinking Water Program.
 - 7.6.2 The permit application shall include a topographical plot plan for the parcel showing the OWTS components, the property boundaries, proposed structures, physical address, and name of property owner.

Tier 1 – Low Risk New or Replacement OWTS

- 7.6.3 The permit application shall provide the estimated wastewater flows, intended use of proposed structure generating the wastewater, soil data, and estimated depth to seasonally saturated soils.
- 7.6.4 The public water system owner shall have 15 days from receipt of the permit application to provide recommendations and comments to the permitting agency.
- 7.7 Natural ground slope in all areas used for effluent disposal shall not be greater than 25 percent.
- 7.8 The average density for any subdivision of property made by Tentative Approval pursuant to the Subdivision Map Act occurring after the effective date of this Policy and implemented under Tier 1 shall not exceed the allowable density values in Table 1 for a single-family dwelling unit, or its equivalent, for those units that rely on OWTS.

Average Annual Rainfall (in/yr)	Allowable Density (acres/single family dwelling unit)
0 - 15	2.5
>15 - 20	2
>20 - 25	1.5
>25 - 35	1
>35 - 40	0.75
>40	0.5

8.0 Minimum OWTS Design and Construction Standards

8.1 OWTS Design Requirements

- 8.1.1 A qualified professional shall design all new OWTS and modifications to existing OWTS where the treatment or dispersal system will be replaced or expanded. A qualified professional employed by a local agency, while acting in that capacity, may design, review, and approve a design for a proposed OWTS, if authorized by the local agency.
- 8.1.2 OWTS shall be located, designed, and constructed in a manner to ensure that effluent does not surface at any time, and that percolation of effluent will not adversely affect beneficial uses of waters of the State.
- 8.1.3 The design of new and replacement OWTS shall be based on the expected influent wastewater quality with a projected flow not to exceed 3,500 gallons per day, the peak wastewater flow rates for purposes of sizing hydraulic components, the projected average daily flow for purposes of sizing the dispersal system, the characteristics of the site, and the required level of treatment for protection of water quality and public health.

Tier 1 – Low Risk New or Replacement OWTS

- 8.1.4 All dispersal systems shall have at least twelve (12) inches of soil cover, except for pressure distribution systems, which must have at least six (6) inches of soil cover.
- 8.1.5 The minimum depth to the anticipated highest level of groundwater below the bottom of the leaching trench, and the native soil depth immediately below the leaching trench, shall not be less than prescribed in Table 2.

Table 2: Tier 1 Minimum Depths to Groundwater and Minimum Soil Depth from the Bottom of the Dispersal System	
Percolation Rate	Minimum Depth
Percolation Rate \leq 1 MPI	Only as authorized in a Tier 2 Local Agency Management Plan
1 MPI < Percolation Rate \leq 5 MPI	Twenty (20) feet
5 MPI < Percolation Rate \leq 30 MPI	Eight (8) feet
30 MPI < Percolation Rate \leq 120 MPI	Five (5) feet
Percolation Rate > 120 MPI	Only as authorized in a Tier 2 Local Agency Management Plan
MPI = minutes per inch	

- 8.1.6 Dispersal systems shall be a leachfield, designed using not more than 4 square-feet of infiltrative area per linear foot of trench as the infiltrative surface, and with trench width no wider than 3 feet. Seepage pits and other dispersal systems may only be authorized for repairs where siting limitations require a variance. Maximum application rates shall be determined from stabilized percolation rate as provided in Table 3, or from soil texture and structure determination as provided in Table 4.
- 8.1.7 Dispersal systems shall not exceed a maximum depth of 10 feet as measured from the ground surface to the bottom of the trench.

Tier 1 – Low Risk New or Replacement OWTS

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

Tier 1 – Low Risk New or Replacement OWTS

Table 4: Design Soil Application Rates			
(Source: USEPA Onsite Wastewater Treatment Systems Manual, February 2002)			
Soil Texture (per the USDA soil classification system)	Soil Structure Shape	Grade	Maximum Soil Application Rate(gallons per day per square foot)¹
Coarse Sand, Sand, Loamy Coarse Sand, Loamy Sand	Single grain	Structureless	0.8
Fine Sand, Very Fine Sand, Loamy Fine Sand, Loamy Very Fine Sand	Single grain	Structureless	0.4
Coarse Sandy Loam, Sandy Loam	Massive	Structureless	0.2
	Platy	Weak	0.2
		Moderate, Strong	Prohibited
	Prismatic, Blocky, Granular	Weak	0.4
Moderate, Strong		0.6	
Fine Sandy Loam, very fine Sandy Loam	Massive	Structureless	0.2
	Platy	Weak, Moderate, Strong	Prohibited
	Prismatic, Blocky, Granular	Weak	0.2
		Moderate, Strong	0.4
Loam	Massive	Structureless	0.2
	Platy	Weak, Moderate, Strong	Prohibited
	Prismatic, Blocky, Granular	Weak	0.4
		Moderate, Strong	0.6
Silt Loam	Massive	Structureless	Prohibited
	Platy	Weak, Moderate, Strong	Prohibited
	Prismatic, Blocky, Granular	Weak	0.4
		Moderate, Strong	0.6
Sandy Clay Loam, Clay Loam, Silty Clay Loam	Massive	Structureless	Prohibited
	Platy	Weak, Moderate, Strong	Prohibited
	Prismatic, Blocky, Granular	Weak	0.2
		Moderate, Strong	0.4
Sandy Clay, Clay, or Silty Clay	Massive	Structureless	Prohibited
	Platy	Weak, Moderate, Strong	Prohibited
	Prismatic, Blocky, Granular	Weak	Prohibited
		Moderate, Strong	0.2

¹ Soils listed as prohibited may be allowed under the authority of the Regional Water Board, or as allowed under an approved Local Agency Management Plan per Tier 2.

Tier 1 – Low Risk New or Replacement OWTS

- 8.1.8 All new dispersal systems shall have 100 percent replacement area that is equivalent and separate, and available for future use.
- 8.1.9 No dispersal systems or replacement areas shall be covered by an impermeable surface, such as paving, building foundation slabs, plastic sheeting, or any other material that prevents oxygen transfer to the soil.
- 8.1.10 Rock fragment content of native soil surrounding the dispersal system shall not exceed 50 percent by volume for rock fragments sized as cobbles or larger and shall be estimated using either the point-count or line-intercept methods.
- 8.1.11 Increased allowance for IAPMO certified dispersal systems is not allowed under Tier 1.

8.2 OWTS Construction and Installation

- 8.2.1 All new or replacement septic tanks and new or replacement oil/grease interceptor tanks shall comply with the standards contained in Sections K5(b), K5(c), K5(d), K5(e), K5(k), K5(m)(1), and K5(m)(3)(ii) of Appendix K, of Part 5, Title 24 of the 2007 California Code of Regulations.
- 8.2.2 All new septic tanks shall comply with the following requirements:
 - 8.2.2.1 Access openings shall have watertight risers, the tops of which shall be set at most 6 inches below finished grade; and
 - 8.2.2.2 Access openings at grade or above shall be locked or secured to prevent unauthorized access.
- 8.2.3 New and replacement OWTS septic tanks shall be limited to those approved by the International Association of Plumbing and Mechanical Officials (IAPMO) or stamped and certified by a California registered civil engineer as meeting the industry standards, and their installation shall be according to the manufacturer's instructions.
- 8.2.4 New and replacement OWTS septic tanks shall be designed to prevent solids in excess of three-sixteenths (3/16) of an inch in diameter from passing to the dispersal system. Septic tanks that use a National Sanitation Foundation/American National Standard Institute (NSF/ANSI) Standard 46 certified septic tank filter at the final point of effluent discharge from the OWTS and prior to the dispersal system shall be deemed in compliance with this requirement.

Tier 1 – Low Risk New or Replacement OWTS

- 8.2.5 A Licensed General Engineering Contractor (Class A), General Building Contractor (Class B), Sanitation System Contractor (Specialty Class C-42), or Plumbing Contractor (Specialty Class C-36) shall install all new OWTS and replacement OWTS in accordance with California Business and Professions Code Sections 7056, 7057, and 7058 and Article 3, Division 8, Title 16 of the California Code of Regulations. A property owner may also install his/her own OWTS if the as-built diagram and the installation are inspected and approved by the Regional Water Board or local agency at a time when the OWTS is in an open condition (not covered by soil and exposed for inspection).

Tier 2 – Local Agency OWTS Management Program

Tier 2 – Local Agency OWTS Management Program

Local agencies may submit management programs for approval, and upon approval then manage the installation of new and replacement OWTS under that program. Local Agency Management Plans approved under Tier 2 provide an alternate method from Tier 1 programs to achieve the same policy purpose, which is to protect water quality and public health. In order to address local conditions, Local Agency Management Plans may include standards that differ from the Tier 1 requirements for new and replacement OWTS contained in Sections 7 and 8. As examples, a Local Agency Management Plan may authorize different soil characteristics, usage of seepage pits, and different densities for new developments. Once the Local Agency Management Plan is approved, new and replacement OWTS that are included within the Local Agency Management Plan may be approved by the Local Agency. A Local Agency, at its discretion, may include Tier 1 standards within its Tier 2 Local Agency Management Plan for some or all of its jurisdiction. However, once a Local Agency Management Plan is approved, it shall supersede Tier 1 and all future OWTS decisions will be governed by the Tier 2 Local Agency Management Plan until it is modified, withdrawn, or revoked.

9.0 Local Agency Management Plan for Minimum OWTS Standards

The Local Agency Management Plan for minimum OWTS Standards is a management program where local agencies can establish minimum standards that are differing requirements from those specified in Tier 1 (Section 7 and Section 8), including the areas that do not meet those minimum standards and still achieve this Policy's purpose. Local Agency Management Plans may include any one or combination of the following to achieve this purpose:

- Differing system design requirements;
- Differing siting controls such as system density and setback requirements;
- Requirements for owners to enter monitoring and maintenance agreements; and/or
- Creation of an onsite management district or zone.

9.1 Where different and/or additional requirements are needed to protect water quality the local agency shall consider the following, as well as any other conditions deemed appropriate, when developing Local Agency Management Plan requirements:

- 9.1.1 Degree of vulnerability to pollution from OWTS due to hydrogeological conditions.
- 9.1.2 High Quality waters or other environmental conditions requiring enhanced protection from the effects of OWTS.
- 9.1.3 Shallow soils requiring a dispersal system installation that is closer to ground surface than is standard.
- 9.1.4 OWTS is located in area with high domestic well usage.

Tier 2 – Local Agency OWTS Management Program

- 9.1.5 Dispersal system is located in an area with fractured bedrock.
 - 9.1.6 Dispersal system is located in an area with poorly drained soils.
 - 9.1.7 Surface water is vulnerable to pollution from OWTS.
 - 9.1.8 Surface water within the watershed is listed as impaired for nitrogen or pathogens.
 - 9.1.9 OWTS is located within an area of high OWTS density.
 - 9.1.10 A parcel's size and its susceptibility to hydraulic mounding, organic or nitrogen loading, and whether there is sufficient area for OWTS expansion in case of failure.
 - 9.1.11 Geographic areas that are known to have multiple, existing OWTS predating any adopted standards of design and construction including cesspools.
 - 9.1.12 Geographic areas that are known to have multiple, existing OWTS located within either the pertinent setbacks listed in Section 7.5 of this Policy, or a setback that the local agencies finds is appropriate for that area.
- 9.2 The Local Agency Management Plan shall detail the scope of its coverage, such as the maximum authorized projected flows for OWTS, as well as a clear delineation of those types of OWTS included within and to be permitted by the program, and provide the local site evaluation, siting, design, and construction requirements, and in addition each of the following:
- 9.2.1 Any local agency requirements for onsite wastewater system inspection, monitoring, maintenance, and repairs, including procedures to ensure that replacements or repairs to failing systems are done under permit from the local governing jurisdiction.
 - 9.2.2 Any special provisions applicable to OWTS within specified geographic areas near specific impaired water bodies listed for pathogens or nitrogen. The special provisions may be substantive and/or procedural, and may include, as examples: consultation with the Regional Water Board prior to issuing permits, supplemental treatment, development of a management district or zone, special siting requirements, additional inspection and monitoring.
 - 9.2.3 Local Agency Management Plan variances, for new installations and repairs in substantial conformance, to the greatest extent practicable. Variances are not allowed for the requirements stated in sections 9.4.1 through 9.4.9.
 - 9.2.4 Any educational, training, certification, and/or licensing requirements that will be required of OWTS service providers, site evaluators, designers, installers, pumpers, maintenance contractors, and any other person relating to OWTS activities.
 - 9.2.5 Education and/or outreach program including informational materials to inform OWTS owners about how to locate, operate, and maintain their

Tier 2 – Local Agency OWTS Management Program

OWTS as well as any Water Board order (e.g., Basin Plan prohibitions) regarding OWTS restrictions within its jurisdiction. The education and/or outreach program shall also include procedures to ensure that alternative onsite system owners are provided an informational maintenance or replacement document by the system designer or installer. This document shall cite homeowner procedures to ensure maintenance, repair, or replacement of critical items within 48 hours following failure. If volunteer well monitoring programs are available within the local agency's jurisdiction, the outreach program shall include information on how well owners may participate.

- 9.2.6 An assessment of existing and proposed disposal locations for septage, the volume of septage anticipated, and whether adequate capacity is available.
 - 9.2.7 Any consideration given to onsite maintenance districts or zones.
 - 9.2.8 Any consideration given to the development and implementation of, or coordination with, Regional Salt and Nutrient Management Plans.
 - 9.2.9 Any consideration given to coordination with watershed management groups.
 - 9.2.10 Procedures for evaluating the proximity of sewer systems to new or replacement OWTS installations.
 - 9.2.11 Procedures for notifying the owner of a public water system prior to issuing an installation or repair permit for an OWTS, if the OWTS is within 1,200 feet of an intake point for a surface water treatment plant for drinking water, is in the drainage area catchment in which the intake point is located, and is located such that it may impact water quality at the intake point such as upstream of the intake point for a flowing water body, or if the OWTS is within a horizontal sanitary setback from a public well.
 - 9.2.12 Policies and procedures that will be followed when a proposed OWTS dispersal area is within the horizontal sanitary setback of a public well or a surface water intake point. These policies and procedures shall either indicate that supplemental treatment as specified in 10.9 and 10.10 of this policy are required for OWTS that are within a horizontal sanitary setback of a public well or surface water intake point, or will establish alternate siting and operational criteria for the proposed OWTS that would similarly mitigate the potential adverse impact to the public water source.
 - 9.2.13 Any plans for the phase-out or discontinuance of cesspool usage.
- 9.3 The minimum responsibilities of the local agency for management of the Local Agency Management Plan include:
- 9.3.1 Maintain records of the number, location, and description of permits issued for OWTS where a variance is granted.

Tier 2 – Local Agency OWTS Management Program

9.3.2 Maintain a water quality assessment program to determine the general operation status of OWTS and to evaluate the impact of OWTS discharges, and assess the extent to which groundwater and local surface water quality may be adversely impacted. The focus of the assessment should be areas with characteristics listed under section 9.1. The assessment program will include monitoring and analysis of water quality data, review of complaints, variances, failures, and any information resulting from inspections. The assessment may use existing water quality data from other monitoring programs and/or establish the terms, conditions, and timing for monitoring done by the local agency. At a minimum this assessment will include monitoring data for nitrates and pathogens, and may include data for other constituents which are needed to adequately characterize the impacts of OWTS on water quality. Other monitoring programs for which data may be used include but are not limited to any of the following:

- 9.3.2.1. Random well samples from a domestic well sampling program.
- 9.3.2.2. Routine real estate transfer samples if those are performed and reported.
- 9.3.2.3. Review of public system sampling reports done by the local agency or another municipality responsible for the public system.
- 9.3.2.4. Water quality testing reports done at the time of new well development if those are reported.
- 9.3.2.5. Beach water quality testing data performed as part of Health and Safety Code Section 115885.
- 9.3.2.6. Receiving water sampling performed as a part of a NPDES permit.
- 9.3.2.7. Data contained in the California Water Quality Assessment Database.
- 9.3.2.8. Groundwater sampling performed as part of Waste Discharge Requirements.
- 9.3.2.9. Groundwater data collected as part of the Groundwater Ambient Monitoring and Assessment Program and available in the Geotracker Database.

9.3.3 Submit an annual report by February 1 to the applicable Regional Water Board summarizing the status of items 9.3.1 through 9.3.2 above. Every fifth year, submit an evaluation of the monitoring program and an assessment of whether water quality is being impacted by OWTS, identifying any changes in the Local Agency Management Plan that will be undertaken to address impacts from OWTS. The first report will commence one year after approval of the local agency's Local Agency Management Plan. In addition to summarizing monitoring data collected per 9.3.2 above, all groundwater monitoring data generated by the local agency shall be submitted in EDF format for inclusion into

Tier 2 – Local Agency OWTS Management Program

Geotracker, and surface water monitoring shall be submitted to CEDEN in a SWAMP comparable format.

- 9.4 The following are not allowed to be authorized in a Local Agency Management Plan:
- 9.4.1 Cesspools of any kind or size.
 - 9.4.2 OWTS receiving a projected flow over 10,000 gallons per day.
 - 9.4.3 OWTS that utilize any form of effluent disposal that discharges on or above the post installation ground surface such as sprinklers, exposed drip lines, free-surface wetlands, or a pond.
 - 9.4.4 Slopes greater than 30 percent without a slope stability report approved by a registered professional.
 - 9.4.5 Decreased leaching area for IAPMO certified dispersal systems using a multiplier less than 0.70.
 - 9.4.6 OWTS utilizing supplemental treatment without requirements for periodic monitoring or inspections.
 - 9.4.7 OWTS dedicated to receiving significant amounts of wastes dumped from RV holding tanks.
 - 9.4.8 Separation of the bottom of dispersal system to groundwater less than two (2) feet, except for seepage pits, which shall not be less than 10 feet.
 - 9.4.9 Installation of new or replacement OWTS where public sewer is available. The public sewer may be considered as not available when such public sewer or any building or exterior drainage facility connected thereto is located more than 200 feet from any proposed building or exterior drainage facility on any lot or premises that abuts and is served by such public sewer. This provision does not apply to replacement OWTS where the connection fees and construction cost are greater than twice the total cost of the replacement OWTS and the local agency determines that the discharge from the OWTS will not affect groundwater or surface water to a degree that makes it unfit for drinking or other uses.
 - 9.4.10 Except as provided for in sections 9.4.11 and 9.4.12, new or replacement OWTS with minimum horizontal setbacks less than any of the following:
 - 9.1.1.1. 150 feet from a public water well where the depth of the effluent dispersal system does not exceed 10 feet in depth.
 - 9.1.1.2. 200 feet from a public water well where the depth of the effluent dispersal system exceeds 10 feet in depth.
 - 9.1.1.3. Where the effluent dispersal system is within 600 feet of a public water well and exceeds 20 feet in depth the horizontal setback required to achieve a two-year travel time for microbiological contaminants shall be evaluated. A qualified professional shall conduct this evaluation. However in no case shall the setback be less than 200 feet.

Tier 2 – Local Agency OWTS Management Program

- 9.1.1.4. Where the effluent dispersal system is within 1,200 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 400 feet from the high water mark of the reservoir, lake or flowing water body.
- 9.1.1.5. Where the effluent dispersal system is located more than 1,200 feet but less than 2,500 feet from a public water systems' surface water intake point, within the catchment area of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 200 feet from the high water mark of the reservoir, lake or flowing water body.
- 9.4.11 For replacement OWTS that do not meet the above horizontal separation requirements, the replacement OWTS shall meet the horizontal separation to the greatest extent practicable. In such case, the replacement OWTS shall utilize supplemental treatment and other mitigation measures, unless the permitting authority finds that there is no indication that the previous system is adversely affecting the public water source, and there is limited potential that the replacement system could impact the water source based on topography, soil depth, soil texture, and groundwater separation.
- 9.4.12 For new OWTS, installed on parcels of record existing at the time of the effective date of this Policy, that cannot meet the above horizontal separation requirements, the OWTS shall meet the horizontal separation to the greatest extent practicable and shall utilize supplemental treatment for pathogens as specified in section 10.8 and any other mitigation measures prescribed by the permitting authority.
- 9.5 A Local Agency Management Plan for OWTS must include adequate detail, including technical information to support how all the criteria in their program work together to protect water quality and public health.
- 9.6 A Regional Water Board reviewing a Local Agency Management Plan shall consider, among other things, the past performance of the local program to adequately protect water quality, and where this has been achieved with criteria differing from Tier 1, shall not unnecessarily require modifications to the program for purposes of uniformity, as long as the Local Agency Management Plan meets the requirements of Tier 2.

Tier 3 – Impaired Areas

Tier 3 – Advanced Protection Management Programs for Impaired Areas

Existing, new, and replacement OWTS that are near impaired water bodies may be addressed by a TMDL and its implementation program, or special provisions contained in a Local Agency Management Plan. If there is no TMDL or special provisions, new or replacement OWTS within 600 feet of impaired water bodies listed in Attachment 2 must meet the applicable specific requirements of Tier 3.

10 Advanced Protection Management Program

An Advanced Protection Management Program is the minimum required management program for all OWTS located near a water body that has been listed as impaired due to nitrogen or pathogen indicators pursuant to Section 303(d) of the Clean Water Act. Local agencies are authorized to implement Advanced Protection Management Programs in conjunction with an approved Local Agency Management Plan or, if there is no approved Local Agency Management Plan, Tier 1.

Local agencies are encouraged to collaborate with the Regional Water Boards by sharing any information pertaining to the impairment, provide advice on potential remedies, and regulate OWTS to the extent that their authority allows for the improvement of the impairment.

- 10.1 The geographic area for each water body's Advanced Protection Management Program is defined by the applicable TMDL, if one has been approved. If there is not an approved TMDL, it is defined by an approved Local Agency Management Plan, if it contains special provisions for that water body. If it is not defined in an approved TMDL or Local Agency Management Plan, it shall be 600 linear feet [in the horizontal (map) direction] of a water body listed in Attachment 2 where the edge of that water body is the natural or levied bank for creeks and rivers, the high water mark for lakes and reservoirs, and the mean high tide line for tidally influenced water bodies, as appropriate. OWTS near impaired water bodies that are not listed on Attachment 2, and do not have a TMDL and are not covered by a Local Agency Management Plan with special provisions, are not addressed by Tier 3.
- 10.2 The requirements of an Advanced Protection Management Program will be in accordance with a TMDL implementation plan, if one has been adopted to address the impairment. An adopted TMDL implementation plan supersedes all other requirements in Tier 3. All TMDL implementation plans adopted after the effective date of this Policy that contain load allocations for OWTS shall include a schedule that requires compliance with the load allocations as soon as practicable, given the watershed-specific circumstances. The schedule shall require that OWTS implementation actions for OWTS installed prior to the TMDL implementation plan's effective date shall commence within 3 years after the TMDL implementation plan's effective date, and that OWTS implementation actions for OWTS installed after the TMDL implementation plan's effective date shall commence immediately. The TMDL implementation plan may use some

Tier 3 – Impaired Areas

or all of the Tier 3 requirements and shall establish the applicable area of implementation for OWTS requirements within the watershed. For those impaired water bodies that do have an adopted TMDL addressing the impairment, but the TMDL does not assign a load allocation to OWTS, no further action is required unless the TMDL is modified at some point in the future to include actions for OWTS. Existing, new, and replacement OWTS that are near impaired water bodies and are covered by a Basin Plan prohibition must also comply with the terms of the prohibition, as provided in Section 2.1.

- 10.3 In the absence of an adopted TMDL implementation plan, the requirements of an Advanced Protection Management Program will consist of any special provisions for the water body if any such provisions have been approved as part of a Local Agency Management Plan.
- 10.4 The Regional Water Boards shall adopt TMDLs for impaired water bodies identified in Attachment 2, in accordance with the specified dates.
 - 10.4.1 If a Regional Water Board does not complete a TMDL within two years of the time period specified in Attachment 2, coverage under this Policy's waiver of waste discharge requirements shall expire for any OWTS that has any part of its dispersal system discharging within the geographic area of an Advanced Protection Management Program. The Regional Water Board shall issue waste discharge requirements, general waste discharge requirements, waivers of waste discharge requirements, or require corrective action for such OWTS. The Regional Water Board will consider the following when establishing the waste discharge requirements, general waste discharge requirements, waivers of waste discharge requirements, or requirement for corrective action:
 - 10.4.1.1 Whether supplemental treatment should be required.
 - 10.4.1.2 Whether routine inspection of the OWTS should be required.
 - 10.4.1.3 Whether monitoring of surface and groundwater should be performed.
 - 10.4.1.4 The collection of a fee for those OWTS covered by the order.
 - 10.4.1.5 Whether owners of previously-constructed OWTS should file a report by a qualified professional in accordance with section 10.5.
 - 10.4.1.6 Whether owners of new or replacement OWTS should file a report of waste discharge with additional supporting technical information as required by the Regional Water Board.
- 10.5 If the Regional Water Board requires owners of OWTS to submit a qualified professional's report pursuant to Section 10.4.1.5, the report shall include a determination of whether the OWTS is functioning properly and as designed or requires corrective actions per Tier 4, and regardless of its state of function, whether it is contributing to impairment of the water body.
 - 10.5.1 The qualified professional's report may also include, but is not limited to:

Tier 3 – Impaired Areas

- 10.5.1.1 A general description of system components, their physical layout, and horizontal setback distances from property lines, buildings, wells, and surface waters.
 - 10.5.1.2 A description of the type of wastewater discharged to the OWTS such as domestic, commercial, or industrial and classification of it as domestic wastewater or high-strength waste.
 - 10.5.1.3 A determination of the systems design flow and the volume of wastewater discharged daily derived from water use, either estimated or actual if metered.
 - 10.5.1.4 A description of the septic tank, including age, size, material of construction, internal and external condition, water level, scum layer thickness, depth of solids, and the results of a one-hour hydrostatic test.
 - 10.5.1.5 A description of the distribution box, dosing siphon, or distribution pump, and if flow is being equally distributed throughout the dispersal system, as well as any evidence of solids carryover, clear water infiltration, or evidence of system backup.
 - 10.5.1.6 A description of the dispersal system including signs of hydraulic failure, condition of surface vegetation over the dispersal system, level of ponding above the infiltrative surface within the dispersal system, other possible sources of hydraulic loading to the dispersal area, and depth of the seasonally high groundwater level.
 - 10.5.1.7 A determination of whether the OWTS is discharging to the ground's surface.
 - 10.5.1.8 For a water body listed as an impaired water body for pathogens, a determination of the OWTS dispersal system's separation from its deepest most infiltrative surface to the highest seasonal groundwater level or fractured bedrock.
 - 10.5.1.9 For a water body listed as an impaired water body for nitrogen, a determination of whether the groundwater under the dispersal field is reaching the water body, and a description of the method used to make the determination.
- 10.6 For new, replacement, and existing OWTS in an Advanced Protection Management Program, the following are not covered by this Policy's waiver but may be authorized by a separate Regional Water Board order:
- 10.6.1 Cesspools of any kind or size.
 - 10.6.2 OWTS receiving a projected flow over 10,000 gallons per day.
 - 10.6.3 OWTS that utilize any form of effluent disposal on or above the ground surface.
 - 10.6.4 Slopes greater than 30 percent without a slope stability report approved by a registered professional.

Tier 3 – Impaired Areas

- 10.6.5 Decreased leaching area for IAPMO certified dispersal systems using a multiplier less than 0.70.
- 10.6.6 OWTS utilizing supplemental treatment without requirements for periodic monitoring or inspections.
- 10.6.7 OWTS dedicated to receiving significant amounts of wastes dumped from RV holding tanks.
- 10.6.8 Separation of the bottom of dispersal system to groundwater less than two (2) feet, except for seepage pits, which shall not be less than 10 feet.
- 10.6.9 Minimum horizontal setbacks less than any of the following:
 - 10.6.9.1 150 feet from a public water well where the depth of the effluent dispersal system does not exceed 10 feet in depth;
 - 10.6.9.2 200 feet from a public water well where the depth of the effluent dispersal system exceeds 10 feet in depth:
 - 10.6.9.3 Where the effluent dispersal system is within 600 feet of a public water well and exceeds 20 feet in depth the horizontal setback required to achieve a two-year travel time for microbiological contaminants shall be evaluated. A qualified professional shall conduct this evaluation. However in no case shall the setback be less than 200 feet.
 - 10.6.9.4 Where the effluent dispersal system is within 1,200 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 400 feet from the high water mark of the reservoir, lake or flowing water body.
 - 10.6.9.5 Where the effluent dispersal system is located more than 1,200 feet but less than 2,500 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 200 feet from the high water mark of the reservoir, lake or flowing water body.
 - 10.6.9.6 For replacement OWTS that do not meet the above horizontal separation requirements, the replacement OWTS shall meet the horizontal separation to the greatest extent practicable. In such case, the replacement OWTS shall utilize supplemental treatment and other mitigation measures.
 - 10.6.9.7 For new OWTS, installed on parcels of record existing at the time of the effective date of this Policy, that cannot meet the above horizontal separation requirements, the OWTS shall meet the horizontal separation to the greatest extent practicable and shall

Tier 3 – Impaired Areas

utilize supplemental treatment for pathogens as specified in section 10.10 and any other mitigation measures as prescribed by the permitting authority.

10.7 The requirements contained in Section 10 shall not apply to owners of OWTS that are constructed and operating, or permitted, on or prior to the date that the nearby water body is added to Attachment 2 who commit by way of a legally binding document to connect to a centralized wastewater collection and treatment system regulated through WDRs as specified within the following timeframes:

10.7.1 The owner must sign the document within forty-eight months of the date that the nearby water body is initially listed on Attachment 2.

10.7.2 The specified date for the connection to the centralized community wastewater collection and treatment system shall not extend beyond nine years following the date that the nearby water body is added to Attachment 2.

10.8 In the absence of an adopted TMDL implementation plan or Local Agency Management Plan containing special provisions for the water body, all new or replacement OWTS permitted after the date that the water body is initially listed in Attachment 2 that have any discharge within the geographic area of an Advanced Protection Management Program shall meet the following requirements:

10.8.1 Utilize supplemental treatment and meet performance requirements in 10.9 if impaired for nitrogen and 10.10 if impaired for pathogens,

10.8.2 Comply with the setback requirements of Section 7.5.1 to 7.5.5, and

10.8.3 Comply with any applicable Local Agency Management Plan requirements.

10.9 Supplemental treatment requirements for nitrogen

10.9.1 Effluent from the supplemental treatment components designed to reduce nitrogen shall be certified by NSF, or other approved third party tester, to meet a 50 percent reduction in total nitrogen when comparing the 30-day average influent to the 30-day average effluent.

10.9.2 Where a drip-line dispersal system is used to enhance vegetative nitrogen uptake, the dispersal system shall have at least six (6) inches of soil cover.

Tier 3 – Impaired Areas

- 10.10 Supplemental treatment requirements for pathogens
- 10.10.1 Supplemental treatment components designed to perform disinfection shall provide sufficient pretreatment of the wastewater so that effluent from the supplemental treatment components does not exceed a 30-day average TSS of 30 mg/L and shall further achieve an effluent fecal coliform bacteria concentration less than or equal to 200 Most Probable Number (MPN) per 100 milliliters.
- 10.10.2 The minimum soil depth and the minimum depth to the anticipated highest level of groundwater below the bottom of the dispersal system shall not be less than three (3) feet. All dispersal systems shall have at least twelve (12) inches of soil cover.
- 10.11 OWTS in an Advanced Protection Management Program with supplemental treatment shall be designed to meet the applicable performance requirements above and shall be stamped or approved by a Qualified Professional.
- 10.12 Prior to the installation of any proprietary treatment OWTS in an Advanced Protection Management Program, all such treatment components shall be tested by an independent third party testing laboratory.
- 10.13 The ongoing monitoring of OWTS in an Advanced Protection Management Program with supplemental treatment components designed to meet the performance requirements in Sections 10.9 and 10.10 shall be monitored in accordance with the operation and maintenance manual for the OWTS or more frequently as required by the local agency or Regional Water Board.
- 10.14 OWTS in an Advanced Protection Management Program with supplemental treatment components shall be equipped with a visual or audible alarm as well as a telemetric alarm that alerts the owner and service provider in the event of system malfunction. Where telemetry is not possible, the owner or owner's agent shall inspect the system at least monthly while the system is in use as directed and instructed by a service provider and notify the service provider not less than quarterly of the observed operating parameters of the OWTS.
- 10.15 OWTS in an Advanced Protection Management Program designed to meet the disinfection requirements in Section 10.10 shall be inspected for proper operation quarterly while the system is in use by a service provider unless a telemetric monitoring system is capable of continuously assessing the operation of the disinfection system. Testing of the wastewater flowing from supplemental treatment components that perform disinfection shall be sampled at a point in the system after the treatment components and prior to the dispersal system and shall be conducted quarterly based on analysis of total coliform with a minimum detection limit of 2.2 MPN. All effluent samples must include the geographic coordinates of the sample's location. Effluent samples shall be taken by a service provider and analyzed by a California Department of Public Health certified laboratory.

Tier 3 – Impaired Areas

- 10.16 The minimum responsibilities of a local agency administering an Advanced Protection Management Program include those prescribed for the Local Agency Management Plans in Section 9.3 of this policy, as well as monitoring owner compliance with Sections 10.13, 10.14, and 10.15.

Tier 4 – OWTS Requiring Corrective Action

Tier 4 – OWTS Requiring Corrective Action

OWTS that require corrective action or are either presently failing or fail at any time while this Policy is in effect are automatically included in Tier 4 and must follow the requirements as specified. OWTS included in Tier 4 must continue to meet applicable requirements of Tier 0, 1, 2 or 3 pending completion of corrective action.

11.0 Corrective Action for OWTS

- 11.1 Any OWTS that has pooling effluent, discharges wastewater to the surface, or has wastewater backed up into plumbing fixtures, because its dispersal system is no longer adequately percolating the wastewater is deemed to be failing, no longer meeting its primary purpose to protect public health, and requires major repair, and as such the dispersal system must be replaced, repaired, or modified so as to return to proper function and comply with Tier 1, 2, or 3 as appropriate.
- 11.2 Any OWTS septic tank failure, such as a baffle failure or tank structural integrity failure such that either wastewater is exfiltrating or groundwater is infiltrating is deemed to be failing, no longer meeting its primary purpose to protect public health, and requires major repair, and as such shall require the septic tank to be brought into compliance with the requirements of Section 8 in Tier 1 or a Local Agency Management Plan per Tier 2.
- 11.3 Any OWTS that has a failure of one of its components other than those covered by 11.1 and 11.2 above, such as a distribution box or broken piping connection, shall have that component repaired so as to return the OWTS to a proper functioning condition and return to Tier 0, 1, 2, or 3.
- 11.4 Any OWTS that has affected, or will affect, groundwater or surface water to a degree that makes it unfit for drinking or other uses, or is causing a human health or other public nuisance condition shall be modified or upgraded so as to abate its impact.
- 11.5 If the owner of the OWTS is not able to comply with corrective action requirements of this section, the Regional Water Board may authorize repairs that are in substantial conformance, to the greatest extent practicable, with Tiers 1 or 3, or may require the owner of the OWTS to submit a report of waste discharge for evaluation on a case-by-case basis. Regional Water Board response to such reports of waste discharge may include, but is not limited to, enrollment in general waste discharge requirements, issuance of individual waste discharge requirements, or issuance of waiver of waste discharge requirements. A local agency may authorize repairs that are in substantial conformance, to the greatest extent practicable, with Tier 2 in accordance with section 9.2.3 if there is an approved Local Agency Management Plan, or with an existing program if a Local Agency Management Plan has not been approved and it is less than 5 years from the effective date of the Policy.

- 11.6 Owners of OWTS will address any corrective action requirement of Tier 4 as soon as is reasonably possible, and must comply with the time schedule of any corrective action notice received from a local agency or Regional Water Board, to retain coverage under this Policy.
- 11.7 Failure to meet the requirements of Tier 4 constitute a failure to meet the conditions of the waiver of waste discharge requirements contained in this Policy, and is subject to further enforcement action.

Conditional Waiver of Waste Discharge Requirements

- 12.1 In accordance with Water Code section 13269, the State Water Board hereby waives the requirements to submit a report of waste discharge, obtain waste discharge requirements, and pay fees for discharges from OWTS covered by this Policy. Owners of OWTS covered by this Policy shall comply with the following conditions:
 - 12.1.1 The OWTS shall function as designed with no surfacing effluent.
 - 12.1.2 The OWTS shall not utilize a dispersal system that is in soil saturated with groundwater.
 - 12.1.3 The OWTS shall not be operated while inundated by a storm or flood event.
 - 12.1.4 The OWTS shall not cause or contribute to a condition of nuisance or pollution.
 - 12.1.5 The OWTS shall comply with all applicable local agency codes, ordinances, and requirements.
 - 12.1.6 The OWTS shall comply with and meet any applicable TMDL implementation requirements, special provisions for impaired water bodies, or supplemental treatment requirements imposed by Tier 3.
 - 12.1.7 The OWTS shall comply with any corrective action requirements of Tier 4.
- 12.2 This waiver may be revoked by the State Water Board or the applicable Regional Water Board for any discharge from an OWTS, or from a category of OWTS.

Effective Date

- 13.0 This Policy becomes effective six months after its approval by the Office of Administrative Law, and all deadlines and compliance dates stated herein start at such time.

Financial Assistance

- 14.1 Local Agencies may apply to the State Water Board for funds from the Clean Water State Revolving Fund for use in mini-loan programs that provide low interest loan assistance to private property owners with costs associated with complying with this Policy.
- 14.2 Loan interest rates for loans to local agencies will be set by the State Water Board using its policies, procedures, and strategies for implementing the Clean Water State Revolving Fund program, but will typically be one-half of the States most recent General Obligation bond sale. Historically interest rates have ranged between 2.0 and 3.0 percent.
- 14.3 Local agencies may add additional interest points to their loans made to private entities to cover their costs of administering the mini-loan program.
- 14.4 Local agencies may submit their suggested loan eligibility criteria for the min-loan program they wish to establish to the State Water Board for approval, but should consider the legislative intent stated in Water Code Section 13291.5 is that assistance is encouraged for private property owners whose cost of complying with the requirements of this policy exceeds one-half of one percent of the current assessed value of the property on which the OWTS is located.

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The tables below specifically identify those impaired water bodies where: (1) it is likely that operating OWTS will subsequently be determined to be a contributing source of pathogens or nitrogen and therefore it is anticipated that OWTS would receive a loading reduction, and (2) it is likely that new OWTS installations discharging within 600 feet of the water body would contribute to the impairment. Per this Policy (Tier 3, Section 10) the Regional Water Boards must adopt a TMDL by the date specified in the table. The State Water Board, at the time of approving future 303 (d) Lists, will specifically identify those impaired water bodies that are to be added or removed from the tables below.

Table 5. Water Bodies impaired for pathogens that are subject to Tier 3 as of 2012.

REGION NO	REGION NAME	WATERBODY NAME	COUNTIES	TMDL Completion Date
1	North Coast	Clam Beach	Humboldt	2020
1	North Coast	Luffenholtz Beach	Humboldt	2020
1	North Coast	Moonstone County Park	Humboldt	2020
1	North Coast	Russian River HU, Lower Russian River HA, Guerneville HSA, mainstem Russian River from Fife Creek to Dutch Bill Creek	Sonoma	2016
1	North Coast	Russian River HU, Lower Russian River HA, Guerneville HSA, Green Valley Creek watershed	Sonoma	2016
1	North Coast	Russian River HU, Middle Russian River HA, Geyserville HSA, mainstem Russian River at Healdsburg Memorial Beach and unnamed tributary at Fitch Mountain	Sonoma	2016
1	North Coast	Russian River HU, Middle Russian River HA, mainstem Laguna de Santa Rosa	Sonoma	2016
1	North Coast	Russian River HU, Middle Russian River HA, mainstem Santa Rosa Creek	Sonoma	2016
1	North Coast	Trinidad State Beach	Humboldt	2020
2	San Francisco Bay	China Camp Beach	Marin	2014
2	San Francisco Bay	Lawsons Landing	Marin	2015
2	San Francisco Bay	Pacific Ocean at Bolinas Beach	Marin	2014

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REGION NO	REGION NAME	WATERBODY NAME	COUNTIES	TMDL Completion Date
2	San Francisco Bay	Pacific Ocean at Fitzgerald Marine Reserve	San Mateo	2016
2	San Francisco Bay	Pacific Ocean at Muir Beach	Marin	2015
2	San Francisco Bay	Pacific Ocean at Pillar Point Beach	San Mateo	2016
2	San Francisco Bay	Petaluma River	Marin, Sonoma	2017
2	San Francisco Bay	Petaluma River (tidal portion)	Marin, Sonoma	2017
2	San Francisco Bay	San Gregorio Creek	San Mateo	2019
3	Central Coast	Pacific Ocean at Point Rincon (mouth of Rincon Cr, Santa Barbara County)	Santa Barbara	2015
3	Central Coast	Rincon Creek	Santa Barbara, Ventura	2015
4	Los Angeles	Canada Larga (Ventura River Watershed)	Ventura	2017
4	Los Angeles	Coyote Creek	Los Angeles, Orange	2015
4	Los Angeles	Rincon Beach	Ventura	2017
4	Los Angeles	San Antonio Creek (Tributary to Ventura River Reach 4)	Ventura	2017
4	Los Angeles	San Gabriel River Reach 1 (Estuary to Firestone)	Los Angeles	2015
4	Los Angeles	San Gabriel River Reach 2 (Firestone to Whittier Narrows Dam)	Los Angeles	2015
4	Los Angeles	San Gabriel River Reach 3 (Whittier Narrows to Ramona)	Los Angeles	2015
4	Los Angeles	San Jose Creek Reach 1 (SG Confluence to Temple St.)	Los Angeles	2015
4	Los Angeles	San Jose Creek Reach 2 (Temple to I-10 at White Ave.)	Los Angeles	2015
4	Los Angeles	Sawpit Creek	Los Angeles	2015
4	Los Angeles	Ventura River Reach 3 (Weldon Canyon to Confl. w/ Coyote Cr)	Ventura	2017
4	Los Angeles	Walnut Creek Wash (Drains from Puddingstone Res)	Los Angeles	2015
5	Central Valley	Wolf Creek (Nevada County)	Nevada, Placer	2020
5	Central Valley	Woods Creek (Tuolumne County)	Tuolumne	2020
7	Colorado River	Alamo River	Imperial	2017

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REGION NO.	REGION NAME	WATERBODY NAME	COUNTIES	TMDL Completion Date
7	Colorado River	Palo Verde Outfall Drain and Lagoon	Imperial, Riverside	2017
8	Santa Ana	Canyon Lake (Railroad Canyon Reservoir)	Riverside	2019
8	Santa Ana	Fulmor, Lake	Riverside	2019
8	Santa Ana	Goldenstar Creek	Riverside	2019
8	Santa Ana	Los Trancos Creek (Crystal Cove Creek)	Orange	2017
8	Santa Ana	Lytle Creek	San Bernardino	2019
8	Santa Ana	Mill Creek Reach 1	San Bernardino	2015
8	Santa Ana	Mill Creek Reach 2	San Bernardino	2015
8	Santa Ana	Morning Canyon Creek	Orange	2017
8	Santa Ana	Mountain Home Creek	San Bernardino	2019
8	Santa Ana	Mountain Home Creek, East Fork	San Bernardino	2019
8	Santa Ana	Silverado Creek	Orange	2017
8	Santa Ana	Peters Canyon Channel	Orange	2017
8	Santa Ana	Santa Ana River, Reach 2	Orange, Riverside	2019
8	Santa Ana	Temescal Creek, Reach 6 (Elsinore Groundwater sub basin boundary to Lake Elsinore Outlet)	Riverside	2019
8	Santa Ana	Seal Beach	Orange	2017
8	Santa Ana	Serrano Creek	Orange	2017
8	Santa Ana	Huntington Harbour	Orange	2017

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Table 6. Water Bodies impaired for nitrogen that are subject to Tier 3.

REGION NO.	REGION NAME	WATERBODY NAME	COUNTIES	TMDL Completion Date
1	North Coast	Russian River HU, Middle Russian River HA, mainstem Laguna de Santa Rosa	Sonoma	2015
2	San Francisco Bay	Lagunitas Creek	Marin	2016
2	San Francisco Bay	Napa River	Napa, Solano	2014
2	San Francisco Bay	Petaluma River	Marin, Sonoma	2017
2	San Francisco Bay	Petaluma River (tidal portion)	Marin, Sonoma	2017
2	San Francisco Bay	Sonoma Creek	Sonoma	2014
2	San Francisco Bay	Tomales Bay	Marin	2019
2	San Francisco Bay	Walker Creek	Marin	2016
4	Los Angeles	Malibu Creek	Los Angeles	2016
4	Los Angeles	San Antonio Creek (Tributary to Ventura River Reach 4)	Ventura	2013
8	Santa Ana	East Garden Grove Wintersburg Channel	Orange	2017
8	Santa Ana	Grout Creek	San Bernardino	2015
8	Santa Ana	Rathbone (Rathbun) Creek	San Bernardino	2015
8	Santa Ana	Summit Creek	San Bernardino	2015
8	Santa Ana	Serrano Creek	Orange	2017

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Regional Water Boards, upon mutual agreement, may designate one Regional Water Board to regulate a person or entity that is under the jurisdiction of both (Water Code Section 13228). The following table identifies the designated Regional Water Board for all counties within the State for purposes of reviewing and, if appropriate, approving new Local Agency Management Plans.

Table 7. Regional Water Board designations by County.

County	Regions with Jurisdiction	Designated Region
Alameda	2,5	2
Alpine	5,6	6
Amador	5	5
Butte	5	5
Calaveras	5	5
Colusa	5	5
Contra Costa	2,5	2
Del Norte	1	1
El Dorado	5,6	5
Fresno	5	5
Glenn	5,1	5
Humboldt	1	1
Imperial	7	7
Inyo	6	6
Kern	3,4,5,6	5
Kings	5	5
Lake	5,1	5
Lassen	5,6	6
Los Angeles	4,6	4
Madera	5	5
Marin	2,1	2
Mariposa	5	5
Mendocino	1	1
Merced	5	5
Modoc	1,5,6	5
Mono	6	6
Monterey	3	3
Napa	2,5	2
Nevada	5,6	5
Orange	8,9	8

County	Regions with Jurisdiction	Designated Region
Placer	5,6	5
Plumas	5	5
Riverside	7,8,9	7
Sacramento	5	5
San Benito	3,5	3
San Bernardino	6,7,8	6
San Diego	9,7	9
San Francisco	2	2
San Joaquin	5	5
San Luis Obispo	3,5	3
San Mateo	2,3	2
Santa Barbara	3	3
Santa Clara	2,3	2
Santa Cruz	3	3
Shasta	5	5
Sierra	5,6	5
Siskiyou	1,5	1
Solano	2,5	5
Sonoma	1,2	1
Stanislaus	5	5
Sutter	5	5
Tehama	5	5
Trinity	1	1
Tulare	5	5
Tuolumne	5	5
Ventura	4,3	4
Yolo	5	5
Yuba	5	5