CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

RESOLUTION R5-2017-0045

APPROVING THE LOCAL AGENCY MANAGEMENT PROGRAM
FOR
MARIPOSA COUNTY HEALTH DEPARTMENT

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

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

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

WHEREAS, on 13 May 2016 the Mariposa County Health Department submitted a draft LAMP, along with a preliminary completeness checklist (hereafter checklist) per staff's request; and

WHEREAS on 11 October 2016 staff and Mariposa County Health Department completed discussions on the draft and checklist; and on 15 September 2016 DDW concurred with the proposed setbacks and notifications contingent on an appropriate workshop by 13 May 2018 to define public agency responsibilities and procedures for OWTS Policy implementation; and

WHEREAS, on 26 January 2017, the Central Valley Water Board notified Mariposa County Health Department and interested parties of its intent to approve the LAMP, and provided them with an opportunity for public hearing, and an opportunity to submit comments and recommendations, both on the draft LAMP and checklist; and

WHEREAS, on 7 April 2017, the Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to this action:

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

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a Resolution adopted by the Central Valley Water Board, on 7 April 2017.

- Original Signed by -

PAMELA C. CREEDON, Executive Officer

MARIPOSA COUNTY Local Agency Management Program

Onsite Wastewater Treatment Systems

MARIPOSA COUNTY HEALTH DEPARTMENT

ENVIRONMENTAL HEALTH SERVICES DIVISION

01/24/2017

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I. INTRODUCTION AND SCOPE:

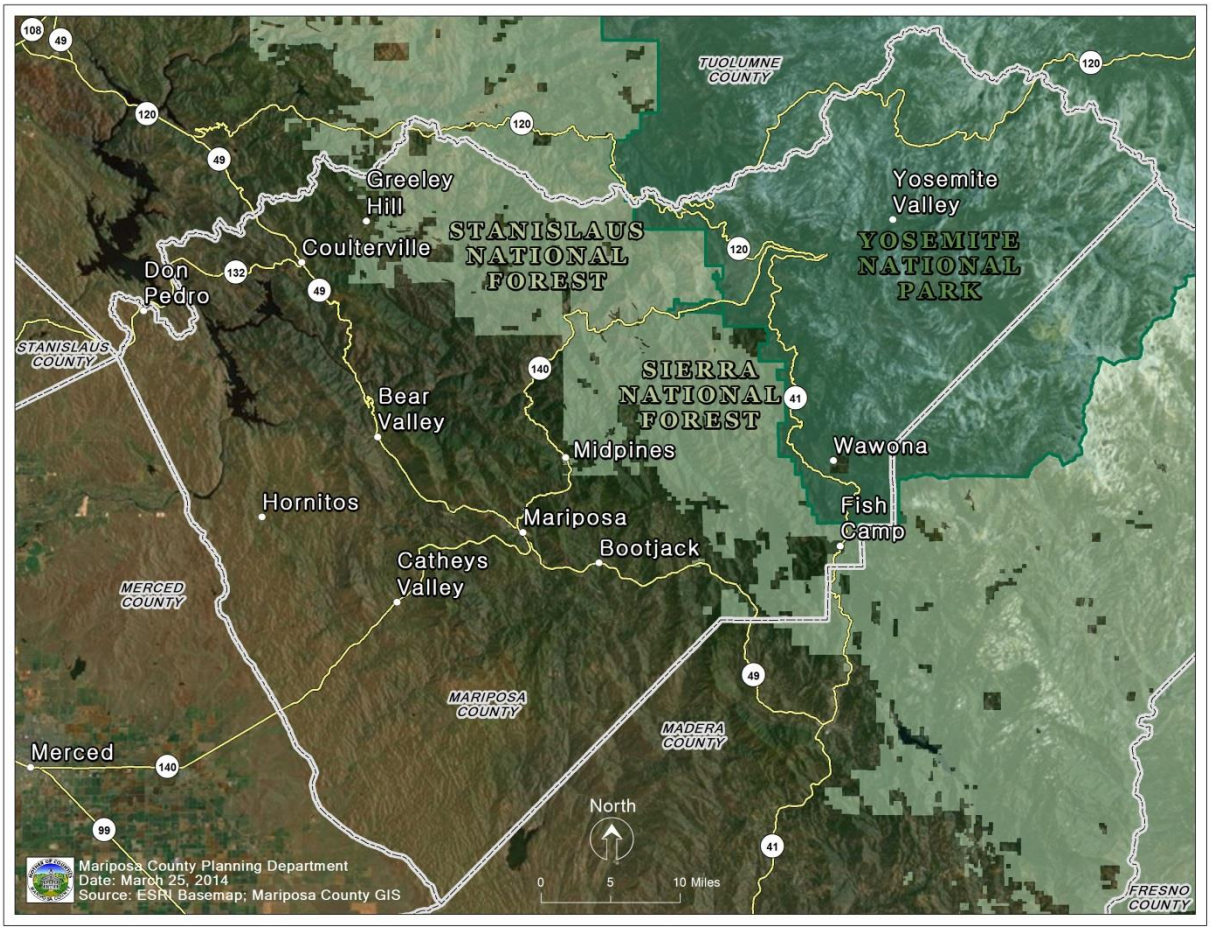
A. Purpose:

The Mariposa County Local Agency Management Program Plan (LAMP) describes how Mariposa County's Onsite Wastewater Treatment System (OWTS) program is in compliance with the State Water Resources Control Board *Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems*, dated July 2012 (POLICY) and applicable Basin Plan policies adopted by the Central Valley Regional Water Quality Control Board. The LAMP describes standards and procedures for reviewing and approving OWTS for individual lots and subdivisions in Mariposa County. The LAMP demonstrates that the Mariposa County OWTS regulatory program is protective of public health and the environment by ensuring the proper treatment and disposal of liquid waste through the appropriate siting, design, installation, maintenance, and monitoring of OWTS given the specific geologic, hydrologic, and soil characteristics of Mariposa County.

B. Geographical Setting:

Located in the western foothills of the Sierra Nevada Mountains, Northeast of Fresno, East of Merced, and Southeast of Sacramento, Mariposa County is bordered by Tuolumne, Madera and Merced counties. The county has a total area of 1,463 square miles (3,790 km^2), of which 1,449 square miles (3,750 km^2) is land and 14 square miles (36 km^2) (1.0%) is water. Approximately 58% of the county is publicly owned land. Public lands include: The National Park Service, Yosemite National Park, Sierra National Forest, Stanislaus National Forest, State of California, Army Corp of Engineers, Bureau of Land Management, Mariposa County and Mariposa County School District. The remaining 42% of the County is privately owned lands. Approximately 50% of the privately owned lands are under Williamson Act Contracts that prohibit development.

Mariposa County is wholly located within the boundaries of the California Regional Water Quality Control Board, Central Valley Region.



Map showing the Boundaries and Geographical Area of Mariposa County.

C. **Introduction and Applicability:**

Mariposa County is a rural county with no incorporated cities. A few of the densely populated areas include public sewer systems; however, the majority of the households rely on OWTS. The California Department of Finance estimates the total population of Mariposa County is 17,531 in the 2015.

The Mariposa County Health Department, Environmental Health Services Division is responsible for regulating OWTS located in all areas of Mariposa County except Yosemite National Park, which maintains exclusive jurisdiction over itself. Privately owned inholdings located in Yosemite are regulated by the Mariposa County Environmental Health Services Division.

The Environmental Health Services Division is part of the Department of Public Health. The Environmental Health Services Division has been overseeing the installation, maintenance and repair of OWTS for over 50 years. The Environmental Health Services Division staff regularly attend continuing education in the field of OWTS siting and design. The current staff working in the OWTS program have a combined experience of 52 years working with OWTS in Mariposa County.

The LAMP will apply throughout Mariposa County.

The LAMP does not apply to the following:

1. Individual OWTS that are installed or designed predominantly for recreational vehicle wastewater, commercial/ industrial wastewater including food processing, and winery/brewery wastewater from commercial development in areas not served by public sewer without specific authorization from the Regional Water Quality Control Board.

2. Community sewage disposal systems including public sewer systems and community on-site sewage disposal systems.

Notwithstanding number 1 and 2 above the LAMP will be applicable under certain conditions: (1) with authorization from the Regional Water Quality Control Board, the OWTS project will be under the jurisdiction of Mariposa County LAMP for application/plan review, issuing authorization to construct, and construction inspections; (2) the wastewater is low strength black water from lavatories and toilets at commercial facilities; (3) high strength liquid waste from commercial food facilities with a BOD of <900 mg/l/day that are connected to a grease separator before discharging to a disposal area; and (4) gray water that is discharged in compliance with our gray water ordinance Chapter 13.10, state law or regulation.

D. **Supporting Regulatory Documents:**

The LAMP relies upon the following Mariposa County Regulatory Documents:

1. Mariposa County Code, Title 13.08, *Sewage Disposal*, that addresses the siting, design, construction, operation and maintenance of OWTS.

2. Mariposa County Rules and Regulations governing onsite sewage disposal pursuant to Mariposa County Code, section 13.08.090 that further addresses the siting, design, construction, operation and maintenance of OWTS.

3. Mariposa County Code, Title 13.12, *Cleaning of Sewage Disposal Systems* that addresses standards for businesses engaged in liquid waste pumping from OWTS.

4. Mariposa County Code, Title 13.06, *Sewers*, that addresses connections to sewer systems.

5. Mariposa County General Plan, that addresses land use and density.

6. Mariposa County Code, Titles 16, 17, *Planning*, that addresses subdivisions and zoning setbacks.

7. Mariposa County Health Department Policies regarding sewage disposal.

E. **General Overview and Types of OWTS, Scope and Coverage:**

Mariposa County Code, Title 13.08 provides requirements for OWTS proposed as part of subdivision of land, a building permit, a land use permit, or replacement, upgrade, and/or repair of an existing system. Mariposa County Environmental Health Services Division has a long-standing relationship with the Fresno office of the Regional Water Control Board where we work collaboratively on systems discharging between 3500 gpd and 10,000 gpd. We refer systems that discharge more than 3,500 gpd on

a case-by-case basis, depending on threat potential, to the RWQCB as outlined in Health Department Policy 16-04. Therefore, Mariposa County Code currently meets the standards within the POLICY**.**

Mariposa County Rules and Regulations governing onsite sewage disposal provides requirements for the following types of OWTS:

1. Standard Systems: OWTS that use gravity to disperse effluent throughout the disposal field, and in which no pretreatment device is utilized are standard systems. This includes OWTS that use a pump to transport effluent received from the septic tank to an uphill disposal field where the effluent is then dispersed by gravity into an absorption field.

2. Alternative Systems: OWTS that use an advanced method of effluent treatment and/or distribution, and are designed by a Professional Engineer (civil), Certified Engineering Geologist or Registered Environmental Health Specialist licensed/registered in the State of California. An alternative system is designed to mitigate soil and/or groundwater conditions that render a lot inappropriate for a standard septic system, or to mitigate severely inadequate replacement area for repair or replacement of an existing, improperly functioning on-site sewage disposal system.

3. Prohibitions:

   Mariposa County Health Department Policies do not allow OWTS to include:

   - Leach (Seepage) pits with a width greater than 3 feet and a depth greater than 5 feet,
   - Waste Disposal wells
   - Cesspools,
   - Discharge to the surface

   Areas to be excluded from OWTS installation:

   - Areas known to be subject to erosion, slope instability, or within identified landslide-prone areas.
   - Low swampy areas, areas with permanent or intermittent springs, areas with a high groundwater (permanent, fluctuating, seasonal, or perched) within two feet of the ground surface, areas which are subject to standing water, or areas which are subject to flooding by storms having a recurrence interval of less than ten (10) years.
   - Portion of the lot in which there is ledge rock, hard pan, soils with a percolation test results greater than 120 minutes per inch (mpi), or other impervious formations within two (2) feet of ground surface will not be acceptable as an area for installation, expansion, or replacement of an individual sewage disposal system.
   - Installations into areas with fractured rock, or with less than 30% fines as outlined in Policy 91-6.

- Areas of excessive slopes that cannot be mitigated against breakout.

5. Appeals/Variances

   - Any person may appeal decisions of the Environmental Health Services Division to the Environmental Health Manager. The appeal must be in writing and submitted with 10 days of the decision, stating reasons and including supporting documentation.

   - Any decision of the Environmental Health Manager may be appealed to the Director of the Department, and ultimately the Board of Supervisors who will set the date and time of the hearing. All appeals are to be submitted in writing to the Environmental Health Services Division within 10 days of the decision. When the appeals are made to the Board of Supervisors, the Clerk of the Board sets the time and place of hearing, and provides notice to the appellant and the department.

II. SITING AND DESIGN:

A. Site Evaluation:

An OWTS site evaluation must be performed:

1. By a Registered Environmental Health Specialist employed by Mariposa County and experienced in siting evaluation of OWTS.

2. By an OWTS consultant who is a licensed Professional Engineer (Civil), Professional Geologist, Certified Engineering Geologist, Registered Environmental Health Specialist, or a Certified Professional Soil Scientist.

3. Under inspection by the Environmental Health Services Division. This includes prior notification to the Environmental Health Services Division to ensure that staff is available to witness the site evaluation.

4. Prior to the issuance of any permits to construct, expand, modify, or replace an OWTS, or approval of a lot line adjustment or tentative subdivision map. The exception to this is when Environmental Health Service Division reviews existing soil data and approves modification of an existing system that is functioning properly, including expanding the disposal area or the replacement of a septic tank.

All aspects of an OWTS site evaluation are performed by a qualified professional and will include an on-site review of surface features and conditions which shall include one or more soil evaluations within the boundaries of the area of the on-site sewage disposal system proposed for construction, expansion, alteration, replacement, or repair. Soil characteristics, including texture, color, structure, plasticity, and porosity of each horizon, shall be evaluated to determine permeability.

The qualified professional will identify limiting conditions including, but not limited to; bed rock, hard pan, ground water, saturated soils, impermeable soil layers, and observed free water.

When a consultant is used/required the qualified professional will prepare a site evaluation report that includes all data relative to the proper placement, design and operation of an on-site sewage disposal system, including, but not limited to, percolation tests, soil profiles, hydrometer tests, depth to groundwater, slope measurements and surface water flow for each proposed sewage disposal system or lot to demonstrate compliance with these standards. All data, whether used in the final design of the disposal field or rejected, shall be included in the report.

The standards require the report be signed by the consultant responsible for the site evaluation and include their license/registration number. The OWTS consultant will submit the site evaluation to Environmental Health Services Division for review. After reviewing the site evaluation report, the Environmental Health Services Division may require additional information including a follow up technical report prepared by a Certified Soil Scientist, Certified Engineering Geologist, Professional Geologist, or Registered Professional Engineer to address soil limitations and/or slope instability.

B. Hydro Geologic Evaluation:

To verify adequate separation of OWTS from groundwater, the qualified professional will estimate the highest anticipated level of groundwater by identifying the highest extent of soil mottling to natural grade observed in a soil profile, or by direct observation of stabilized groundwater levels.

If the consultant uses, or Environmental Health Services Division requires direct observation of groundwater levels, the consultant will use performance wells or piezometers to collect measurements every 2 weeks during the wet weather period between October 15th and March 15th. The wet weather period may be extended earlier or later depending on weather patterns and with approval of the Environmental Health Services Division. The consultant may propose alternate wet weather groundwater plans provided the groundwater monitoring plan will capture seasonal high groundwater elevation in the proposed primary and reserve disposal fields.

Where a conflict exists between the depth of groundwater observed through direct observation during wet weather conditions and the depth at which soil mottles are observed, the direct observation of actual groundwater levels will govern.

In the case of a proposed subdivision, if the Environmental Health Services Division determines that there is a potential for significant degradation or impact to the elevation of groundwater or the surface water supplies, the project is denied based on CEQA findings of significant and un-mitigatable conditions.

C. Land Use Projects with Onsite Wastewater Treatment Systems:

Mariposa County Rules and Regulations governing onsite sewage disposal systems specifies that the Environmental Health Services Division will review land use projects, subdivisions including tentative maps, and proposed lot line adjustments, prior to approval.

The applicant and/or owner of the property shall be responsible for supplying any and all information, testing, and consent to inspect, as required by the Environmental Health Services Division, to verify that the subdivisions or lot line adjustments comply with applicable codes, rules and regulations. The Environmental

Health Services Division reports its conclusions together with any conditions necessary to ensure compliance with all applicable codes, rules and regulations to the Planning Department or other responsible agency.

D. Domestic Wells and Parcel Size

Mariposa County standards address the concern of high usage of domestic wells in areas that use OWTS by regulating parcel size, and are more protective of public health and the environment by requiring less density for a subdivision than the average densities per subdivision specified in the POLICY.

Mariposa County Code, Title 17 requires that where sewage disposal is not by means of a sewer operated by public sewer agency, it shall be by means of an OWTS located entirely on the lot generating the sewage.

Each proposed lot within a subdivision that is not served by a public sewer system will meet the following minimum site and design criteria:

1. Lots served by both an individual water supply and an OWTS that are not located in a town planning area shall not be less than 5 acres.

2. Lots, which are served by OWTS and community water supplies in town planning areas operated by a public agency or utility district shall not be less than 2.5 acres.

3. Parcels that meet the above, but have limiting conditions on site must be of sufficient size in order to meet the required setbacks to accommodate the conventional site development.

A detailed discussion of Mariposa County OWTS standards for subdivisions can be found in the Mariposa County Health Department Policy 03-01.

E. General Design Standards:

1. All new, expanded, modified, repaired, or replacement OWTS will be in a location for which the applicant has obtained site evaluation data for the use in the design and installation of the system.

2. A replacement area equivalent to 100% of the initial system area conforming to the standards is required for every lot served by an OWTS.

3. Soil Texture Zones are those described in the unified soil classification system.

4. The percentage of coarse fragments throughout the effective soil depth will not exceed seventy (70%) percent by volume as retained on a #10 sieve.

5. Percolation Rates in the disposal field area and the effective soil depth within the disposal area shall not be less than 5 minutes per inch or more than 60 minutes per inch.

   There is an exception for alternative and experimental OWTS: the percolation test results throughout the disposal field area and required effective soil depth will not be less than one minute per inch or more than 120 minutes per inch for new lots created after 2003. Lots created prior to 2003 are allowed to have systems designed in areas where the percolation rate is slower than 120 mpi when no other option is available for the design.

6. Slope. Currently the OWTS standards require native slopes not be more that 30%. Other slope limitations may apply depending on the type of on-site sewage disposal system proposed. Lots may not

be graded or altered in any manner to accommodate the slope requirement and leach lines will not be installed in areas of excessively concave slopes. Mariposa County Code meets and exceeds the provisions within the POLICY.

7. Areas of filled soil or unstable soil formations will not be used for a disposal field site. The on-site sewage disposal system shall be located and installed in natural, undisturbed and unobstructed ground or earth.

8. No grading shall occur in the area of the proposed or installed on-site sewage disposal system or replacement area.

9. An individual on-site sewage disposal system shall only be installed on the same lot as the structure to which it is connected.

10. Disposal fields and replacement areas shall be maintained so as to facilitate aerobic treatment and the evapotranspiration of wastewater.

11. Disposal fields will not be reduced in lineal feet for the use of chamber systems.

12. OWTS will be located so as to be accessible for maintenance or repair. Septic tanks, dosing tanks, and interceptors will be located so as to readily allow pumping and maintenance. Pressure distribution lines shall be located to accommodate monitoring and flushing of the lines.

13. Septic Tanks shall be constructed of reinforced concrete. Fiberglass or polyethylene tanks may be installed where concrete tanks are not feasible because of access limitations, slopes, or safety concerns, only with the approval of Environmental Health Services Division.

Mariposa County OWTS standards require that non-typical standard leach field design, alternative, experimental, and pump systems be designed by an OWTS Designer who is a Professional Engineer, Certified Engineering Geologist, or Registered Environmental Health Specialist. The OWTS Designer will use the site evaluation data discussed previously for the design of the disposal system to ensure maximum equal distribution of wastewater through-out the disposal area. Mariposa County Health department Policies discuss the use of various types of components and systems.

Mariposa County OWTS standards also address the use of sealed vaults including portable toilets In Mariposa County Code Section 13.08.030.

Mariposa County OWTS standards require that any person proposing to develop any property utilizing an OWTS, whether for new construction, remodel, addition, or replacement must submit copies of the general site layout, the detailed OWTS drawn to scale, and floor plan for the proposed development to the Environmental Health Services Division. The plans must be complete, and must clearly show the exact locations of the following whether existing or proposed:

1. Parcel number and address if applicable;

2. Name, address and telephone number of property owner;

3. Name, address, and telephone number of the person preparing the application package;

4. A vicinity map and the scale used;

5. Lot dimensions including all property lines, setbacks, easements, right-of-ways, and side yards;

6. Vehicle traffic areas whether paved or unpaved;

7. Structures including pools, dwellings, and auxiliary buildings;
8. Any hazardous materials storage including fuel tanks;
9. Animal enclosures;
10. Plumbing including existing and proposed stub outs and water lines;
11. Existing and proposed wells, springs, neighboring wells, streams, ditches, canals, ponds, and any other body of water located within 100 feet of the property line;
12. Areas subject to flooding, ravines, bluffs, cut banks, and the slope;

Each project will have a site evaluation unless the project does not cause any increase in the potential generation of sewage and Environmental Health Services Division has conducted an inspection and verified that the project will not significantly impact the existing OWTS or the replacement area for the OWTS. For a detailed discussion of building permits, new construction, additions, and replacement structures please review Mariposa County residential/commercial site plan requirements and application.

The Mariposa County Building Division routes all Building Applications to the Environmental Health Services Division for review. Environmental Health reviews each application to determine whether there is a need to (1) modify/upgrade an existing OWTS; (2) install a new OWTS; (3) perform a site evaluation to identify a replacement area; (4) conform the project to all septic and well setbacks.

Mariposa County OWTS standards specify the minimal horizontal separation between the components of the OWTS including the required reserve area. These setbacks are detailed in Table 1.

Table 1: Minimum Setback Requirements,

Facility	Domestic Well	Public Well	Flowing Stream[1]	Drainage Course or Ephemeral Stream[2]	Cut Or Fill Bank[3]	Property Line[4]	Lake Or Reservoir[5]
Septic Tank or Sewer Line	50	100	50	25	10	25	50
Leaching Field[6]	100	150 - 200[10]	100	50	4 times the height max 100ft	50	200-400[7,9]
Seepage Pit[8]	150	150-200[10]	100	50	4 times the height max 100ft	75	200-400[7,9]

Notes:

1. As measured from the line which defines the limit of a 10-year frequency flood.
2. As measured from the edge of the drainage course or stream.
3. Distance in feet equal four times the vertical height of the cut or fill.
4. This distance shall be maintained when individual wells are to be installed and the minimum distance between waste disposal and wells cannot be assured.

5. As measured from the high water line.
6. Leachfields must be located in areas of less than 30% slope.
7. May be reduced to 100 ft if pond meets conditions in policy 07-02
8. Only allowed in extreme cases for repairs, additional mitigation factors required.
9. 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. If the dispersal system is > 10 feet in depth the setback shall be increased to 200 feet

Where adverse conditions exist, Mariposa County Code allows the Environmental Health Services Division to increase the minimum horizontal separation distances pertaining to the construction of the OWTS. The Environmental Health Division (EHSD) is requiring setbacks of septic tank and disposal field to be 150 – 200 feet from a public water system pursuant water board drinking water division standards**.**

Mariposa County OWTS standards/policies also establish soil depths for each limiting condition. Table 2 details limiting conditions:

Table 2: Soil Depth below Absorption Field to Limiting Condition,

Soil texture[1]	Percolation Rate Minutes per inch (mpi)	Depth to groundwater	Depth to other limiting factor
Sand, Loamy Sand	1 mpi – 5 mpi	Requires Alternative treatment design [2]	3 feet[3]
	6 mpi- 60 mpi	5 feet[3]	3 feet[3]
Sandy Clay, Clay Loam, Clay, Silty Clay, Silty Clay Loam, Silt Loam, Silt	6 mpi – 60 mpi	5 feet[3]	3 feet[3]
	61 mpi- 120mpi	5 feet[3] May require alternative design	3 feet[3]

Notes:

1. *Soil texture of the most limiting soil layer in the active leaching layers directly below proposed disposal fields (within two feet to five feet below trench bottom depending on the type of system*
2. *If an alternative system is used then the depth may be reduced to two to five feet dependent on the system proposed. Pretreatment and de nitrification may be required for any allowed reduction of setback.*
3. *Separation distances may be reduced to two feet if a pretreatment device approved by Environmental Health Services Division is used before disposal by pressure distribution*
4. *Applies to sites approved for alternative systems utilizing pressure distribution methods and can be reduced if a pretreatment device is used before disposal of effluent into soil.*

In summary, Mariposa County OWTS standards meet the intent of the POLICY and the Basin Plans the California Regional Water Quality Control Board.

Mariposa County OWTS standards are protective of public health and the environment by; (1) requiring a site evaluation for a new OWTS or the repair, replacement, modification of an existing system; (2) identifying replacement areas with **at least** 100 % the size of the initial disposal area in case of the initial system failure during the site evaluation process; (3) requiring consultants with specific credentials to design systems; (4)

allowing the use of alternative systems such as pressure dose, ATU/nutrient treatment system, sand filter, at grade, mound system etc; (5) not allowing unacceptable designs such as: Evapotranspiration systems, leach pits and cesspools.

For a detailed discussion of OWTS system designs and specification see Mariposa County Title 13.08 and Mariposa County Rules and Regulations governing on-site sewage disposal systems.

F. Impaired Water Bodies

There are no identified impaired water bodies within Mariposa County.

G. Installation Near Existing Sewers:

Mariposa County OWTS standards require a connection to a public sewer for all proposed lots, new development, additions, or remodels that propose to generate wastewater, and for existing structures requiring repairs to septic system if sewer is available and the property is located within 200 feet of the line.

Mariposa County will not issue permits for the installation, repair, replacement, or expansion of an OWTS if a sewer is deemed to be available. Mariposa County OWTS standards do not apply to community sewage disposal systems including public sewer systems that are subject to Regional Water Quality Control Board review and approval. For a detailed discussion of OWTS system designs and specification see Mariposa County Title 13.08 and Mariposa County Rules and Regulations governing on-site sewage disposal systems.

H. Inspection, Construction and Enforcement:

The Environmental Health Services Division references the *Onsite Wastewater Treatment Systems* by US EPA dated 2002, *Onsite Wastewater Treatment Systems* by Bennette D. Burks and Mary Margaret Minnis dated 1994, Product information and design specification for OWTS manufacturers and distributers, *Environmental Engineering and Sanitation* by Joseph Salvado 4th edition or later as references for OWTS within Mariposa County.

The Environmental Health Services Division tracks all complaints regarding the discharge of sewage and the failure of OWTS through the Department's internal database. Each location is provided a unique tracking number and information related to the type of the complaint and actions to abate are saved and can be readily recalled as needed. Environmental Health staff responds to all complaints of failed OWTS and the discharge of sewage by conducting inspections, documenting site conditions, and issuing a Notice of Violation specifying corrective actions as needed. For OWTS the typical corrective actions include stopping the discharge and obtaining a permit to repair or replace the OWTS. Initial response is the same day we are notified or no more than 24 hrs.

The Environmental Health Services Division addresses OWTS malfunction, poor performance, or failure by:

1. Responding to complaints of failing systems and/or unpermitted repairs;
2. Permitting of OWTS installations, modifications, expansions, or repairs;
3. Conducting construction inspections including, a preconstruction meeting, inspecting open trenches, inspecting rock and pipe, conducting other inspections as necessary for the system and a final construction inspection;
4. Reviewing the design consultants certification that the OWTS has been installed according to standards and permit conditions;

5. Issuing septic tank destruction permits and conducting inspections;

6. Requiring maintenance and performance monitoring annually by an approved OWTS consultant when alternative design systems using aerobic treatment technology are installed.

7. Requiring maintenance and performance monitoring notices to be placed on the deed of alternative design systems using aerobic treatment technology.

Mariposa County OWTS standards require an applicant to obtain a permit for the installation, repair, replacement, expansion, modification, or destruction of an OWTS. The standards provide that the contractor, property owner, or any other person must not violate or fail to comply with any construction permit condition, and require that only the work specifically authorized by the construction permit may be performed.

Mariposa County Environmental Health Services does not require a permit for the following:

- Clearing stoppages in pipes as long as OWTS is undisturbed;
- Cleaning each septic tank, dosing tanks, interceptor, holding tank or other sewage receptacle that is pumped by a sewage disposal service that is permitted by Mariposa County;
- Exposing portions of the OWTS to evaluate its performance or operation as long as it is not damaged, altered, modified, or repaired;
- Repairing Risers and lids;
- Repairing Effluent filters;
- Repairing Sanitary tees;
- Repairing Distribution boxes

The Environmental Health Services Division may address malfunctioning or failing systems by denying, suspending, or revoking a permit for: (1) not complying with standards; (2) a failing or abandoned OWTS; (3) providing false information; (4) failing to comply with monitoring or maintenance requirements. The OWTS standards prohibit the surface discharge of sewage. The OWTS standards provide that any person, firm, corporation, will be deemed guilty of an infraction and subject to a fine. For more detailed discussion of these activities see Mariposa County Code, title 13.08.

I. Operation and Maintenance Program

Mariposa County implements a comprehensive operation and maintenance program through the following methods:

1. Education of OWTS Owners.

   The Environmental Health Services Division maintains information on its website to educate OWTS owners on proper operation and maintenance. This information can be found at: http://www.mariposacounty.org/index.aspx?nid=378

   The information provides general guidance to all OWTS owners on proper operation and maintenance of OWTS. Mariposa County also maintains electronic databases that the public can access which has

documents (permits, design, and site map) specific to the permit for the specific OWTS. Mariposa County requires that homeowners with engineered OWTS provide operation information and all conditions to a subsequent property owner or tenant upon transfer of the property.

2. Public Outreach:

   The Environmental Health Services Division provides information on Mariposa County OWTS standards, general soil characteristics, and general ground water depths, as well as information on specific parcels to consultants, contractors, property owners, and prospective buyers and their representatives in person, by telephone, and by email. Mariposa County EHSD is on-call 24/7 to respond to sewage releases in all areas of Mariposa County.

   The Environmental Health Services Division has OWTS file information in both hard copy and a digital imaging format that is available for review upon request. Environmental Health Service Division provides public information from these files by email as describe above, or US Mail upon request.

   The Environmental Health Services Division portion of the Mariposa County website has FAQs on OWTS; lists of OWTS consultants, licensed septic contractors, licensed septic pumpers that work within the county; information for owners on maintenance of OWTS; and site evaluation information. The Environmental Health Services Division has previously coordinated well monitoring programmatically with the Mariposa County watershed management group.

III. WATER QUALITY IMPACTS:

A. Licensing:

Mariposa County OWTS standards and State Laws require the following certification, licensing, or registration, of the professionals involved in the installation, modification, repair, upgrade, and maintenance of OWTS:

1. *OWTS Consultant*--The OWTS consultant will be a Professional Engineer, Professional Geologist, Certified Engineering Geologist, or Registered Environmental Health Specialist certified/ registered by the State of California. or a Certified Professional Soil Scientist certified by the Soil Science Society of America.

2. *OWTS Designer* --The designer is an OWTS consultant who is a Professional Engineer, Certified Engineering Geologist, or Registered Environmental Health Specialist certified/registered by the State of California.

3. *OWTS Installer* --A contractor licensed by State of California as a General Engineering contractor (Class A), General Building contractor (Class B), Sanitation System contractor (C-42), or a Plumbing contractor (C-36) that conforms to Business and Professions Code sections 7056, 7057, and 7058.

4. *OWTS Service Providers* – The OWTS standards currently require maintenance and performance monitoring done by a licensed consultant or contractor with knowledge of OWTS triennially for operating, monitoring, and maintaining an OWTS according to the Policy and Mariposa County Code.

An exception to this is that the property owner, as an owner builder, is allowed by law to install his/her own OWTS under permit with inspections from the Environmental Health Services Division and perform annual maintenance to their alternative or experimental OWTS in accordance with manufacturers requirements.

Currently, the Mariposa County requires as built plans and operation and maintenance manuals for all engineered OWTS as part of the required design consultant's certification for each system. Mariposa County provides information on the operation and maintenance of OWTS to all owners of newly installed systems.

B. **Liquid Waste Disposal and Disposal Capacity**:

Environmental Health Services Division regulates liquid waste pumping within the political boundaries of Mariposa County pursuant to Mariposa County Code, Title 13.12 and the Health and Safety Code. Environmental Health Services Division inspects and issues permits for liquid waste pumping/portable toilet companies that work within Mariposa County. The Environmental Health Services Division receives pumper reports from owners of all permitted vehicles. Environmental Health Services Division enters this data into database capable of interacting with the county GIS system to track the disposal and to use as a monitoring tool for the indication of failing septic systems.

The Environmental Health Services Division will assess the county's liquid waste disposal capacity by performing the following actions:

1. Survey the POTW capacity within Mariposa County.
2. Determine the total volume of septic waste from pumper truck manifests.
3. Survey Septic Pumper firms permitted by Mariposa County to verify septic waste disposal locations in and outside Mariposa County.

C. Cumulative Impacts:

Mariposa County OWTS standards define a community sewage disposal system as a system that accepts sewage from two or more lots and is owned, operated, and maintained according to the Mariposa County General Plan by a government agency, public utility, maintenance district, or other similar entity approved by the Local Agency Formation Commission. Community sewage disposal systems must be approved and operated under permit from the applicable California Regional Water Quality Control Board.

Mariposa County OWTS standards address nutrient and salts by prohibiting the discharge of waste to an OWTS from roofs, water softeners, and swimming pool filters. Mariposa County OWTS standards allow the Environmental Health Division to require the use of treatment devices to reduce nitrogen to protect ground water from nitrates. When Environmental Health Services Division receives an application to repair or modify an existing OWTS on an existing non-conforming lot with shallow ground water and/or restricting soil conditions, then the repair or modification may be required to include the addition of a pretreatment device. Within Mariposa County, the known area with high nitrate levels in groundwater is in the BIC Farms area. The Central Valley Regional Water Quality Control Board has identified the sources of nitrate being predominantly from sources other than OWTS. These include historic turkey ranching operations. In the BIC Farms area, OWTS are dispersed throughout the area on large lots with limited density and special well drilling requirements. Therefore, Mariposa County OWTS standards continue to protect public health and the environment.

D. Public Water Systems

Mariposa County does not have any Public Water System intakes within 2500 feet of an OWTS. Mariposa County currently does not allow the use of seepage pits or waste wells, and currently does not allow disposal at depths of 10 feet or greater, hence the requirement for notification of a Public Water System within 600 feet of such a system is not applicable in Mariposa County. Environmental Health Services Division currently notifies the OWTS Designers of the 150 feet setback to public drinking water systems. When an OWTS is proposed within 200 feet of a public water system, the Environmental Health Services Division will notify the owner/operator of the public water system as well as the State Water Resources Control Board, Division of Drinking Water prior to issuing the construction permit and may require an alternative design including but not limited to an aerobic treatment device. Environmental Health Services Division will notify both the public water system operation and the SWRCB, Division of Drinking Water within 72 hours of determining there is a failing OWTS within 200 feet of a public water well. Mariposa County sewage standards cover this process of notification during permit process. Therefore, Environmental Health Services Division procedures meet the standards to address notice regarding OWTS meeting proximity standards detailed in the POLICY.

E. Monitoring and Reporting:

The Environmental Health Services Division will use the following types of data for the water quality-monitoring program:

1. Complaint investigation reports;
2. Operation and maintenance inspection reports;
3. Data in the SWAMP database;
4. Data contained in the GAMA database;
5. Operation and maintenance reports submitted to Mariposa County by owners and service providers;
6. Examine frequency of septic pump outs on a given lot using our established database;
7. Use repair permits and inspection reports;
8. Laboratory data received, as courtesy copy, from Public Drinking Water Systems;
9. Laboratory data received, as a courtesy copy, from private well owners who voluntarily submit data;
10. The laboratory data received, as courtesy copy, from NPDES and WDR permitting requirements;
11. Any laboratory data received as a part of a report submitted as borings/ well permit requirements;
12. Any laboratory data from monitoring wells, storm water, surface water bodies that are collect by or provided to our office;
13. Laboratory reports associated with new subdivision water testing;

Therefore, the Environmental Health Services Division's water quality monitoring program meets the POLICY and the Basin Plan policies of the California Regional Water Quality Control Board.

F. **Record Retention**:

The Environmental Health Services Division maintains complaint records including notice of violations, inspection reports, correspondence, permits, site evaluations and system designs. Initially maintained as hard copy, these records are retained permanently as imaged documents. The Environmental Health Services Division has a record retention policy and regularly provides documents pursuant to the California Public Records Act. Environmental Health Services Division will provide documentation to the applicable California Regional Water Quality Control Board pursuant to the California Public Records Act and Health Department Policy 92-6.

G. **Reporting:**

The Environmental Health Services Division will submit an Annual Summary Report by February 1, each year to the applicable California Regional Water Quality Control Board. The annual report will include the following:

1. The location and type of OWTS related complaints investigated during the year and how the complaints were resolved
2. Discussion of the application and registration for septic tank cleaners (Pumpers)
3. The number, location and description of new, modification/upgrade, and repair permits issued and under which Tier.

The Environmental Health Services Division will submit a Monitoring and Analysis or Water Quality report every 5 years as required by the Water Board Policy that includes the following:

1. The review of water quality data described above.
2. The review of complaints in the past five years that involve OWTS.
3. The review of OWTS failures (repairs).
4. The review of O&M inspection findings.
5. An assessment of the water quality within Mariposa County based on data from the water quality monitoring described above.

Mariposa County will provide requested documents/information to the applicable California Regional Water Quality Control Board according to the time lines specified in the State OWTS Policy and by State law.

IV. SUMMARY:

Mariposa County OWTS standards are protective of public health and environment and meet the POLICY's OWTS Tier 2 standards and the Basin Plan policies of the Central Valley, California Regional Water Quality Control Board by:

- Addressing areas vulnerable to OWTS Pollution;

- Identifying limiting conditions during site evaluations;
- Requiring site evaluations to be performed by licensed/registered consultants;
- Requiring septic designs to be performed by Certified Engineering Geologist, Registered Environmental Health Specialist, or a Professional Civil Engineer;
- Requiring enhanced protection by the use of advanced treatment and denitrification units;
- Responding to complaints of failing OWTS;
- Requiring failing OWTS to be destroyed, repaired, or replaced under permit;
- Addressing shallow soils, poor drained soils, and fractured bedrock;
- Addressing high OWTS density by requiring increased lot size and specifying the use of a hydrological study, if warranted, of the cumulative impact of a proposed subdivision; and
- Not allowing cesspools and seepage pits;

References

- *Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems*, State Water Resource Control Board, June 19, 2012
- *Onsite Wastewater Treatment System Policy*, *Draft Substitute Environmental Document*, State Water Resources Control Board, June 6, 2012
- *Environmental Engineering and Sanitation*, Joseph Salvato, 4th Edition
- *Design Manual --- Onsite Wastewater Treatment and Disposal Systems*, United State Environmental Protection Agency, October 1980
- *Onsite Wastewater Treatment Systems Manual*, United States Environmental Protection Agency, February 2002

Appendix 1

Region V Checklist for LAMPs

	LAMP Review, Mariposa County			
	K. Carpenter, D. Calanchini, E. Rapport revised 11 October 2016			
	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**
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.	p. 20	Waterboard Policy 3.3 and Mariposa County Sewage Disposal Rules and Regulations Section .055

3.3.1	Complaints	Include numbers and locations of complaints, related investigations, and means of resolution.	p. 20	Waterboard Policy 3.3.1 and Mariposa County Sewage Disposal Rules and Regulations Section .055
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.	p. 17-18	County Code 13.12
3.3.3	Permits for New and Replacement OWTS	Include numbers and locations of permits for new and replacement OWTS, and their Tiers.	p. 20	County Code 13.08.070
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.	p. 20	Government Code Title 1, Division 7, Chapter 3.5, section 6253©
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.	p. 19	Water Board Policy Section 3.4 and Mariposa County Sewage Disposal Rules and Regulations Section .055
9.0	Minimum OWTS Standards	This Section is an introduction; we require no specific LAMP Section citation here.		
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.	p. 14-15	County Code 13.08.120, Mariposa Rules and Regulations

9.1.1	Degree of vulnerability due to local hydrogeology	*Describe your commitment, and proposed means to identify* hydrogeologically vulnerable areas for Section 9.3.2, *after compiling monitoring data*. Discuss appropriate related siting restrictions and design criteria to protect water quality and public health. Qualified professionals ("Definitions," page 9 in the Policy) should identify hydrogeologically vulnerable areas. *Such professionals, where appropriate during a Water Quality Assessment, should generally consider locally reasonable percolation rates of least permeable relevant soil horizons, best available evidence of seasonally shallowest groundwater (including, but not limited to, soil mottling and gleying, static water levels of nearby wells and springs, and local drainage patterns), threats to receptors (supply wells and surface water), and potential geotechnical issues (including, but not limited to, potentially adverse dips of bedding, foliations, and fractures in bedrock).*	p. 9 II, Siting and Design, A, Site Evaluation, beginning on page 7, and B., Hydro-Geologic Evaluation, beginning on page 8.	Mariposa Health Department Rules and Regulations 0.061 - 0.063
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. *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.*	p. 9-10	Code 17.020.010, Mariposa County General Plan 5-10
9.1.3	Shallow soils requiring non-standard dispersal systems	*We interpret "shallow" soils generally to mean thin soils overlying bedrock or highest seasonal groundwater. Dependent on threats to receptors, highest seasonal groundwater can locally include perched and intermittent saturated zones, as well as the shallowest local hydraulically unconfined aquifer unit. See Section 8.1.5 for Minimum Depths to Groundwater under Tier 1.* Qualified professionals should make appropriate determinations on the design and construction of non-standard dispersal systems due to shallow soils.	p. 10-12	Mariposa Rules and Regulations 0.061 0.066, Health Department Policy 03-01
9.1.4	High domestic well usage areas	*Our key potential concerns are nitrate and pathogen transport toward receptor wells, especially in areas with existing OWTS already prone to soft failures (OWTS failures not evident at grade). Appropriate qualified professionals should consider reasonable pollutant flow paths toward domestic wells, at minimum based on; publically available nitrate concentrations in local wells, published technical literature on local wastewater and non-wastewater nitrate sources, well constructions, pumping demands, and vulnerability of wells due to local hydrogeology. For pathogens, qualified professionals should ensure that field methods are sufficient to mitigate the potential for false positives.*	p. 9	Mariposa General Plan Pg 5-30 Health Department Policy 03-01

9.1.5	Fractured bedrock	*Where warranted, appropriate qualified professionals should assess permeability trends of water-bearing fractures, and related potential pathways of effluent toward receptors, including but not limited to, domestic wells and surface water. The professionals should also consider potential geotechnical issues. We suggest consideration of fractured bedrock in concert with percolation rates of overlying soils; either very high or low percolation rates might warrant siting restrictions or non-standard dispersal systems. See also State Water Resources Control Board Order WQ 2014-0153-DWQ, Attachment 1, page 1-3, Item A-3.*	p.7	Mariposa Rules and Regulations 0.061, Health Department Policy 03-01, 13-22, 89-28, 89-10, 89-12, 91-06
9.1.6	Poorly drained soils	*Appropriate qualified professionals should give criteria for determination of representative percolation rates, including but not limited to, general site evaluation, trench logging, pre-soak and measurement methods of percolation tests, and acceptable alternatives for percolation tests.*	p. 8, 10, and 13	Mariposa Rules and Regulations 0.061, Health Department Policy 89-10, and 91-06
9.1.7	Vulnerable surface water	*Our key potential concern is eutrophication of fresh surface water. While typically with relatively low mobility in groundwater and recently informally banned in dishwater detergents, phosphate is a common cause. At minimum, describe appropriate qualified professionals who will consider potential pathways of wastewater-sourced phosphate and other nutrients toward potentially threatened nearby surface bodies.*	p. 12-13	Mariposa Rules and Regulations 0.061
9.1.8	Impaired water bodies	*Wolf Creek, Nevada County, and Woods Creek, Tuolumne County will require Tier 3 Advanced Protection Management Programs. This applies to Nevada, Placer, and Tuolumne Counties. See Attachment 2 of the OWTS Policy.*	p. 14	not applicable
9.1.9	High OWTS density areas	*Where nitrate is an identified chronic issue, at minimum, consider nitrogen loading per area; for example, see Hantzsche and Finnemore (1992), Crites and Tchobanoglous (1998), and more recent publications as appropriate.*	p. 17-18	Mariposa Rules and Regulations 0.061, Mariposa General Plan p. 5-30
9.1.10	Limits to parcel size	At minimum, consider hydraulic mounding, nitrate and pathogen loading, and sufficiency of potential replacement areas.	p. 9-10	Mariposa Rules and Regulations 0.061, Mariposa General Plan p. 5-30
9.1.11	areas with OWTS that predate adopted standards	This refers to areas with known, multiple existing OWTS.	p. 9-14	Mariposa Rules and Regulations 0.061
9.1.12	areas with OWTS either within prescriptive, Tier 1 setbacks, or within	This refers to areas with known, multiple existing OWTS.	p. 9-14	Mariposa Rules and Regulations 0.061, Health Department Policy 89-28

	setbacks that a Local Agency finds appropriate			
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.	p. 7	Mariposa Rules and Regulations 0.061
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.	p. 6	Mariposa Rules and Regulations 0.061
9.2.2	Special Provision Areas and Requirements near Impaired Water Bodies	*Wolf Creek, Nevada County, and Woods Creek, Tuolumne County will require Tier 3 Advanced Protection Management Programs. This applies to Nevada, Placer, and Tuolumne Counties. See Attachment 2 of the OWTS Policy.*	Not applicable	Not applicable
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.	p. 7	Mariposa Rules and Regulations 0.061
9.2.4	Qualifications for Persons who Work on OWTS	Qualifications generally cover requirements for education, training, and licensing. *We suggest that Local Agencies review information available from the California Onsite Water Association (COWA), see*:	p. 17-18	California Contractors Licensing Board
		http://www.cowa.org/		
9.2.5	Education and Outreach for OWTS Owners	Education and Outreach generally supports owners on locating, operating, and maintaining OWTS . At minimum, ensure that you will require OWTS designers and installers to provide owners with sufficient information to address critical maintenance, repairs, and parts replacements within 48 hours of failure; *see also Tier 4*. Also, provide information to appropriate volunteer groups. *At minimum, we suggesting providing this information on your*	p. 16	Mariposa Rules and Regulations 0.061

		webpage.		
9.2.6	Septage Disposal	Assess existing and proposed disposal locations, and their adequacy.	p. 17-18	County Code 13.12
9.2.7	Maintenance Districts and Zones	*These generally refer to Homeowners Associations, special maintenance districts, and similar responsible entities. Requirements for responsible entities should generally reflect the Local Agency's judgment on minimum sizes of subdivisions that could potentially cause environmental impacts. LAMPs should ensure that responsible entities have the financial resources, stability, legal authority, and professional qualifications to operate community OWTS.*	p. 15 III, Water Quality Impacts, C., Cumulative Impacts, page 18	Mariposa Rules and Regulations 0.061, Health Department Policy 03-01
9.2.8	Regional Salt and Nutrient Management Plans	Consider development and implementation of, or coordination with, Regional Salt and Nutrient Management Plans; *see also State Board Resolution 2009-0011:*	p. 18	Mariposa Rules and Regulations 0.061
		http://www.waterboards.ca.gov/centralvalley/water_issues/salinity/laws_regs_policies/rw_policy_implementation_mem.pdf		
9.2.9	Watershed Management Groups	Coordinate *with volunteer well monitoring programs* and similar watershed management groups.	p.17	Not applicable
9.2.10	Proximity of Collection Systems to New or Replacement OWTS	Evaluate proximity of sewer systems to new and replacement OWTS. S*ee also Section 9.4.9*.	p. 14	Mariposa Rules and Regulations 0.061
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.	p. 18-19	Health Department Policy 16-02
9.2.12	Policies for Dispersal Areas within Setbacks of Public Wells and Surface Water Intakes	Discuss supplemental treatments; see Sections 10.9 and 10.10. A Local Agency can propose alternate criteria; *however we will need rationale in detail.*	p. 13 Miinmum Setback Requirements, Table 1, page 12.	Mariposa Rules and Regulations 0.070, No encroachments allowed.

9.2.13	Cesspool Discontinuance and Phase-Out	Provide plans and schedule.	p. 7 I Introduction and Scope, E, General Overview and Types of OWTS, 3., Prohibitions, page 6, II Siting and Design, E., General Design Standards, page 14, IV, and Summary, page 21.	County Code 13.08.060
9.3	Minimum Local Agency Management Responsibilities:	For Section 9.3 et sew, 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:	p. 19-20	Waterboard Policy Section 3.3 and Mariposa County Sewage Disposal Rules and Regulations Section .055
9.3.1	Permit Records, OWTS with Variances	Describe your records maintenance; numbers, locations, and descriptions of permits where you have granted variances.	p. 19	Waterboard Policy Section 3.3 and Mariposa County Sewage Disposal Rules and Regulations Section .055
9.3.2	Water Quality Assessment Program:	In the Water Quality Assessment Program, generally focus on areas with characteristics covered in Section 9.1. Include monitoring and analysis of water quality data, complaints, variances, failures, and inspections. Also include appropriate monitoring for nitrate and pathogens; you can use information from other programs. *We are available to provide further guidance on reporting requirements. In the interim, to assist with analyses and evaluation reports (Section 9.3.3), we suggest posting data on appropriate maps; for example consider the following links*:	p. 19-22	Waterboard Policy Section 3.3 and Mariposa County Sewage Disposal Rules and Regulations Section .055
		http://www.nrcs.usda.gov/wps/portal/nrcs/site/ca/home/		
		http://www.cdpr.ca.gov/docs/emon/grndwtr/gwpa_maps.htm		
		http://ngmdb.usgs.gov/maps/mapview/		
		http://www.conservation.ca.gov/cgs/information/publications/ms/Documents/MS58.pdf		
		http://www.water.ca.gov/groundwater/data_and_monitoring/northern_region/GroundwaterLevel/SacValGWContours/100t400_Well		

		s_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	*Apply your best professional judgment to ensure that well sampling focuses on hydrogeologically reasonable pollutant (primarily nitrate) flow paths. A qualified professional should generally design an appropriate directed, judgmental, sample (i.e., statistically non-random). Of the links provided, the Geotracker GAMA website might be particularly useful to the professional; at minimum we suggest reviews of available nitrate data in relevant domestic wells, up-gradient, within, and down-gradient of an area of interest. For some instances, for example where a developer proposes a relatively large project, a Local Agency might require a special study to distinguish between wastewater and non-wastewater sourced nitrate. In such cases, we suggest your consideration of requiring focused sampling and analyses, for example of $\delta^{18}O$ and $\delta^{15}N$ of nitrate (Megan Young, USGS, 2014 pers comm), and the artificial sweeteners sucralose and acesulfame-K (Buerge et al 2009, Van Stempvoort et al 2011, and more recent publications as they become available).*	p. 19	Health Department Policy 08-02
9.3.2.2	Domestic Well Sampling, Routine Real Estate Transfer Related	This applies only if those samples are routinely performed and reported.	p. 19	Not applicable
9.3.2.3	Water Quality of Public Water Systems	Reviews can be by you or another municipality.	p. 19	Not applicable
9.3.2.4	Domestic Well Sampling, New Well Development	This applies if those data are reported.	p. 19	Not applicable
9.3.2.5	Beach Water Quality Sampling, H&S Code §115885	*Public beaches include those on freshwater.*	p. 19	Not applicable
9.3.2.6	Receiving Water Sampling Related to	This refers to existing data from other monitoring programs.	p. 19	Not applicable

	NPDES Permits			
9.3.2.7	Data contained in California Water Quality Assessment Database	This refers to existing data from other monitoring programs.	p. 19	Not applicable
9.3.2.8	Groundwater Sampling Related to Waste Discharge Requirements	This refers to existing data from other monitoring programs.	p. 19	Not applicable
9.3.2.9	Groundwater Sampling Related to GAMA Program	This refers to existing data from other monitoring programs.	p. 19	Not applicable
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.	p. 20	Waterboard Policy Section 3.3 and Mariposa County Sewage Disposal Rules and Regulations Section .055
9.4	Not Allowed or Authorized in LAMP:	For Section 9.4 et seq, ensure that your LAMP covers prohibitions.	p. 5-6	Waterboard Policy Section 3.3 and Mariposa County Sewage Disposal Rules and Regulations Section .055
9.4.1	Cesspools	Local Agencies cannot authorize cesspools of any kind or size.	p. 7 I Introduction and Scope, E, General Overview and Types of OWTS, 3., Prohibitions, page 6, II Siting and Design, E., General Design Standards, page 14,	County Code 13.08.060

			IV, and Summary, page 21.	
9.4.2	Projected Flow>10,000 gpd	*Apply professional judgment to further limit projected flows.*	p. 6	Not applicable
9.4.3	Effluent Discharges Above Post-Installation Ground Surface	For example, Local Agencies cannot authorize effluent disposal using sprinklers, exposed drip lines, free-surface wetlands, and ponds.	p. 7	County Code 13.08.060
9.4.4	Installation on Slopes >30% without Registered Professional's Report	*See also earlier comments, Section 9.1.1, regarding potential geotechnical concerns.*	p. 10	Mariposa Rules and Regulations 0.070
9.4.5	Decreased Leaching Area for IAPMO-Certified Dispersal System with Multiplier <0.70	IAPMO, International Association of Plumbing and Mechanical Officials. *Decreased leaching area refers to alternatives to conventional (stone-and-pipe) dispersal systems; these alternatives require relatively less area. The multiplier, <1, allows for a reduction in dispersal field area relative to a conventional system.*	p. 11	Mariposa Rules and Regulations 0.061
9.4.6	Supplemental Treatments without Monitoring and Inspection	*Therefore, ensure that the LAMP describes periodic inspection and monitoring for OWTS with supplemental treatments*.	p. 15	Mariposa Rules and Regulations 0.061
9.4.7	Significant Wastes from RV Holding Tanks	*We interpret significant amounts to mean amounts greater than incidental dumping, such that volume, frequency, overall strength, or chemical additives preclude definition as domestic wastewater; see Definitions in OWTS Policy. See also, State Water Resources Control Board Order WQ 2014-0153-DWQ, Attachment B-2.*	p. 5-6	Mariposa Rules and Regulations 0.061
9.4.8	Encroachment Above Groundwater	Bottom of OWTS dispersal systems cannot be less than 2 feet above groundwater, or bottom of seepage pits, less than 10 feet above groundwater. *We interpret groundwater to include inter-flow and perched zones, along with the shallowest main unconfined aquifer. Degree of vulnerability to pollution due to hydrogeological conditions, Section 9.1.1, and the Water Quality Assessment, Section 9.3.2., should cover in detail means of assessing seasonally shallowest depth to groundwater.*	p. 7	Waterboard Policy, Basin Plan Mariposa County Rules and Regulations sections .061 & .066

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.)	p. 14	County Code 13.08.060
9.4.10	Minimum Setbacks:	These setbacks are from public water systems.	p. 19	Mariposa Rules and Regulations 0.061
9.4.10.1	From Public Supply Wells	If the dispersal system is less than 10' in depth, then the setback must be greater than150' from public water supply well.	p. 18	Mariposa Rules and Regulations 0.070
9.4.10.2		If the dispersal system is greater than10' in depth, then the setback must be greater than 200' from public water supply well.	p. 18	Mariposa Rules and Regulations 0.070
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'.	p. 18	Mariposa Rules and Regulations 0.070
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.	p. 18	Mariposa Rules and Regulations 0.070, Waterboard Policy Section 9.4.10.4
9.4.10.5	From Public Surface Water Supplies	If the dispersal system is greater than1,200,'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.	p. 18	Mariposa Rules and Regulations 0.061
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.	p. 6, 8, and 12	Mariposa Rules and Regulations 0.070
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.	p. 12-14	Mariposa Rules and Regulations 0.070

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.	p. 1-22	
9.6	Regional Water Quality Control Board Consideration of LAMP	Regional Boards shall consider past performance of local programs to protect water quality. *We will generally consider past performance based on our reviews of annual status and evaluation reports; see Section 9.3.3.*		

Mariposa County Sewage Disposal Rules

(per Section 13.08.090 County Code)

.010 Purpose and Authority:

These rules and regulations establish uniform procedures and standards regulating on-site sewage disposal system design and installation. These procedures and standards are designed to protect the health, safety, and general welfare of the citizens of Mariposa County. Goals of these rules and regulations are as follows:

1. To protect the general health, safety and welfare by minimizing the likelihood of on-site system failure.

2. To protect surface and groundwater quality.

3. To prevent the creation of nuisances associated with on-site sewage disposal systems.

4. To establish a uniform, consistent policy regarding implementation and enforcement of the provisions of this chapter.

5. To prevent the creation of lots which cannot be satisfactorily served by an on-site sewage disposal system.

.020 Scope:

These rules and regulations set forth procedures to control the design and installation of on-site sewage disposal systems, established the administrative procedure to issuance of permits and provide for approval of plans and inspection of systems. These rules and regulations prescribe data needs and administrative procedures for Health Department involvement in the planning and permitting process of the County of Mariposa.

.030 Permits Required:

A sewage disposal system installation permit is required from the Mariposa County Building Department as approved by the County Health Department prior to the initiation of construction activities or repair activities associated with a new or an existing on-site sewage disposal system. Said permit shall be obtained prior to or concurrent with issuance of a building permit covering the construction of any structure requiring on-site disposal facilities.

.040 Health Department Approval Required for Other Permits:

Data requirements are outlined in Section .060 of these rules and regulations for land division applications, major subdivision applications, gift deed certificates of compliance, use permits, proposed commercial and industrial uses, existing lots which have not previously been tested in the area of proposed sewage disposal system and specially designed systems for situations where siting or soil conditions do not meet the minimum requirements of this chapter.

.050 Definitions:

The following definitions apply to this chapter:

1. Abandoned Well: A well whose original purpose and use has been permanently discontinued or which is in such a state of disrepair that it cannot be used for its original

purpose. If an abandoned well has been properly destroyed so that it will not produce nor act as a conduit for the movement of water, it will not be subject to well setback requirements.

2. Community Sewerage System: A piped collection system which delivers sanitary wastes from a number of dwellings, business, commercial, etc., units to one or more wastewater treatment plants. The community sewerage system is normally under the jurisdiction of a public entity and operates under waste discharge requirements issued by the Central Valley California Regional Water Quality Control Board.

3. County Environmental Health Specialist: Environmental Health Manager/Director or an authorized representative.

4. Disposal Area: The area to be used for installation of leaching systems (normally trenches o) from septic tanks.

5. Drainage Course: Channels or low lines of the terrain in which water flows either continuously or intermittently, including wetlands and vernal pools.

6. Ephemeral Stream: A stream or portion of a stream which flows only in direct response to precipitation.

7. Groundwater: The water in the zone of saturation.

8. Impervious Layer: A strata such as clay or shale that does not permit water to move through perceptibly.

9. Individual Disposal System: A collection system and wastewater treatment and disposal facility for individual dwellings, business, commercial, etc., units.

10. Minimum Useable Disposal Area: The minimum area that must be available on a lot to dispose of waste from septic tank-leaching systems.

11. Perennial Stream: A stream which flows throughout the year.

12. Porosity: The ratio of the aggregate volume of interstices in a rock or soil to its total volume.

13. Report of Waste Discharge: A report required under Section 13.260 of the Porter-Cologne Water Quality Control Act.

14. Rock: Any consolidated or coherent and relatively hard, naturally formed mass of mineral matter that cannot normally be excavated by manual methods alone.

15. Sewage: Any liquid waste containing animal or vegetable matter in suspension or solution and may include liquids containing chemicals in solution.

16. Soil: A heterogeneous accumulation of uncemented or partially cemented inorganic and organic material, derived from rock formations through physical disintegration and chemical decomposition processes.

17. Swale: A slightly marshy depression in land which is generally level or unincised ephemeral stream.

18. Water Table: The upper surface of the Zone of Saturation, except where that surface is formed by an impermeable body.

19. Zone of Saturation: Area below the water table at which the soil is completely saturated with groundwater.

20. Bedroom or potential sleeping room:

For purposes of system sizing, a bedroom or potential sleeping room shall mean a habitable room with a floor area equal or greater than seventy (70) square feet with direct or indirect access to a bathroom and designed to provide privacy to the occupant(s), regardless of whether or not it contains a closet. Such rooms include, but are not limited to, rooms labeled on plans as bedrooms, lofts, sewing rooms, dens, offices and game rooms. Kitchens, bathrooms, laundry rooms, or rooms with large entryways lacking doors and designed such that the installation of a door would require a building permit may not be considered bedrooms or potential sleeping rooms. Additionally, rooms that are not considered bedrooms or potential sleeping rooms are rooms that open to a living room, dining room, family room, kitchen, foyer/entry way, or another room such as a master suite, and these rooms have an un-obstructive opening (no doors) with a minimum fifty percent (50%) opening of the total wall space (minimum six feet [6'] wide) with archways or other uncased doorways or acceptable features that do not provide privacy to the occupants. The final determination as to whether a room is a bedroom or potential sleeping room shall be at the discretion of the County Environmental Health Specialist.

.055 Local Area Management Program – (Lamp):

The LAMP as approved by the Board of Supervisors is adopted as part of the these rules and regulations

.060 General Data Needs:

This section covers a wide range of situations where the Health Department requires varying amounts of information and data in order to issue permits or comment knowledgeably about a proposed project. It is the applicant's responsibility and burden to provide the required data prior to processing of an application.

.061 Septic System Permits - Existing Lots – Residential:

A site evaluation shall be conducted by a representative of the Mariposa County Health Department to determine feasibility of siting a system on the lot. For lots six (6) acres or less, if no previously submitted soil bore or perc test data is available covering soil conditions to at least eight feet in depth within 50 feet of the proposed leach field installation, then a minimum of two soil bores or excavations shall be performed within the proposed leachfield area to a depth of at least five (5) feet below the anticipated trench depth to determine the presence or absence of restricting soils, high groundwater, seasonal zones of saturation bedrock and to enable a soils analysis to be performed.

. If restrictive soils are found (those soils containing clay or clean sand) as revealed by field plasticity or dalatency tests - (Unified Soil Classification System Method) then

percolation testing shall be conducted on the property in compliance with procedures outlined in the appendix of these rules and regulations. If evidence of seasonal saturation as revealed by mottling or seepage, within five feet of the bottom of the proposed leach trench then a specially designed system in compliance with .066 shall be required

If percolation testing reveals soil with average percolation rates of less than five (5) minutes per inch or greater than 60 minutes or other restrictions are noted such as shallow depth to bedrock, seasonal saturation or a high groundwater level then a specially designed system may be required in compliance with Section .066 of these rules and regulations.

.062 Septic System Permits - Non-Residential:

Non-residential systems will be processed in the same manner as existing lots (Section .061) except where flows are greater than 450 gallons per day, a specially designed system will be required in compliance with Section .066.

.063 Land Division Applications, Major Subdivision Applications, Planned Developments and Specific Plans;

All lots proposed to be created through the land division process (minor subdivision) shall meet the following requirements:

1. Proposed lots must contain adequate room for sewage disposal systems which meet the requirements as set forth in Section .070 of this chapter, as determined by the County Environmental Health Specialist.

2. A soil report prepared by a Registered Civil Engineer, Certified Engineering Geologist or Registered EHS shall be submitted for approval to the Health Department if proposed lots are six (6) acres or less. For Land Division Applications proposing lots greater than six (6) acres each a soils report may be required by the County Environmental Health Specialist. The soil report shall contain the following:

    a. A description of the topographic and siting restrictions on each lot.

    b. A description of soil conditions encountered in areas tested. This is to be supported by the inclusion of detailed soil logs using the "Unified Soil Classification System".

    c. Percolation test data (see appendix of these rules and regulations for methodology). Four (4) percolation tests per lot minimum will be required. Tests shall be conducted approximately 50' apart and must be conducted within an area that is naturally suitable from a slope, setback and available area standpoint.

    d. A map indicating accurately the location of testing.

    e. Design recommendations for the sewage disposal system submitted under the signature and stamp of the registered professional preparing the report, or

another registered professional retained to prepare the design.

No soil report lacking any of the above information shall be accepted as complete. Processing of the Land Division Application shall be held in abeyance until the above-required information is provided.

.064 Deleted 2017

.065 Gift Deeds/Certificates of Compliance:

All parcels created by means other than the minor or major subdivisions process will be required to meet the requirements of Section .061 and related sections of these rules and regulations and other provisions of Mariposa County Code and State law prior to issuance of a Certificate of Compliance and/or a Building Permit.

.066 Specially Designed Systems:

Specially designed systems are required for commercial, industrial and institutional facilities where on-site sewage disposal systems are proposed and flows exceed 450 gallons/day.

Specially designed systems are required where existing lots, after site evaluation, show restrictive conditions or as required by these rules and regulations. Specially designed sewage disposal systems may be designed by California Registered Environmental Health Specialists, Civil Engineers or Certified Engineering Geologists who are knowledgeable and experienced in on-lot sewage disposal system design. Specially designed systems may not be used if seasonal high groundwater is less than two feet below the bottom of the dispersion system.

Responsibility for design, inspection and certification lie solely with the registered professional designing the sewage disposal system. The County Health Department will, however, perform a preapproval site evaluation, a post construction inspection and will monitor the system periodically.

Where it is apparent that a submitted design does not conform to established design practice and it is probable that the design if installed would create a nuisance or unsanitary condition, the County Environmental Health Specialist with the concurrence of the Health Officer may refuse to issue permits and/or return the plans and specifications to the designing professional for modification. General guidelines for special system designs are included in the appendix of these rules and regulations.

.70 **Minimum Setbacks:** Minimum setbacks are shown in the table below:

Facility	Domestic Well	Public Well	Flowing Stream[1]	Drainage Course or Ephemeral Stream[2]	Cut Or Fill Bank[3]	Property Line[4]	Lake Or Reservoir[5]

Septic Tank or Sewer Line	50	100	50	25	10	25	50
Leaching Field[6]	100	150[10]	100	50	4 times the height max 100ft	50	200-400[7,9]
Seepage Pit[8]	150	150[10]	100	50	4 times the height max 100ft	75	200-400[7,9]

Notes:

1. As measured from the line which defines the limit of a 10-year frequency flood.
2. As measured from the edge of the drainage course or stream.
3. Distance in feet equal four times the vertical height of the cut or fill.
4. This distance shall be maintained when individual wells are to be installed and the minimum distance between waste disposal and wells cannot be assured.
5. As measured from the high water line.
6. Leachfields must be located in areas of less than 30% slope or be specially designed under section .066 to mitigate for slope issues .
7. May be reduced to 100 ft if pond meets conditions in policy 07-02
8. Only allowed in extreme cases for repairs, additional mitigation factors required.
9. 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. If the dispersal system is > 10 feet in depth the setback shall be increased to 200 feet.

.080 Minimum Requirements:

A. Septic Tank:

1. Minimum septic tank is as follows:

Capacity of Septic Tanks

Number of Bedrooms	Liquid Capacity in Gallons
1-3	1000
4	1200
5	1500

Tank capacity shall be three hundred (300) gallons per bedroom for each additional bedroom over 5.

2. Materials of Construction:

a. The septic tank shall have a minimum of two compartments and be constructed of reinforced concrete or precast concrete with a reinforced top. The tank shall be watertight.

b. Wood tanks are not permitted.

3. Tanks constructed of durable and non-corrodible synthetic materials may be allowed subject to the approval of the County Environmental Health Specialist.

4. The inlet and outlet baffles (tees) shall extend at least four (4) inches above and twelve (12) inches below the water level in the tank.

5. The inlet compartment shall not be less than 2/3 of the total capacity of the tank.

6. Access to the septic tank shall be provided by at least two (2) manholes twenty (20) inches in diameter. One shall be located over the inlet compartment and the other over the outlet compartment.

7. Septic tank construction shall conform with applicable California Plumbing Code regulations. Inlet and outlet baffles or compartment partitions shall have a free vent area equal to the required cross sectional area of the house sewer or private sewer discharging there into to provide free ventilation above the water surface from the disposal field through the septic tank, house sewer and stack to the outer air.

8. Horizontal drainage piping from the building to the septic tank shall be a uniform slope of not less than 1/4 inch per foot. In special cases, the slope may be reduced to 1/8 inch per foot. Pipe size shall be four (4) inches and shall be water tight. If less than 1/4 inch per foot slope is required then the pipe size shall be increased to six (6) inches.

9. Minimum distance from septic tank to building foundation is five (5) feet.

10. The building sewer stub shall exit the building no less than six (6) inches nor more than eighteen (18) inches below the final grade.

B. Drainfield:

1. Drainfield trench absorption area shall be based on the infiltration of the sidewall area adjacent to the drainrock and below the distribution pipe.

2. Distribution pipe (perforated pipe) shall be laid level to six (6) inches of fall per 100 feet, with a maximum length of 100 feet.

3. Drain rock shall be between 3/4 inches to 2 1/2 inch washed gravel.

4. In clay soils, smeared or compacted surfaces must be scored prior to filling with rock.

5. Distribution boxes shall be designed to assure equal flow and installed on a level concrete slab with areas around inlets and outlets sealed. All solid piping shall be four (4) inches chemically welded plastic pipe to provide water-tight joints. Polyethylene solid pipe is prohibited.

6. Drainfields shall not be installed in wet or damp clay soils.

7. Lines must be ten (10) feet away from any building foundation.

8. Minimum distance between lines is six (6) feet measured center to center.

9. A 50 foot setback is required from all perimeter lot lines unless waived by the Health Department.

10. Perforated pipe shall not be less than four (4) inches in diameter and contain 1/4 - 1/2 inch minimum perforations. Tile lines are prohibited.

11. Before drainlines are laid, approved rock shall be placed in the trench to a minimum depth of 18 inches. A minimum cover of two (2) inches of gravel over the drainline is required. A cover of straw or untreated building paper is required to prevent the dirt backfill from entering the voids in the gravel.

12. A distribution box shall be constructed at the head of each subsurface disposal field. The box shall be at least 12 inches across inside and of water tight construction. The box or boxes shall rest in or on a concrete slab on undisturbed soil or compacted fill, such that settling will not occur. The box or boxes shall be placed at least five (5) feet from the beginning of the leachfield.

13. Leachline trenches should be 18 to 24 inches wide.

14. A copy of the approved plot plan and permit must be on the site during construction.

15. Inspection risers shall be installed in all leach lines to determine depth of standing effluent in the line. Inspection risers shall extend from the bottom of the trench to the surface grade or higher and shall be fitted with a tight fitting removable cap.

C. Sewage Flow Specifications:

1. The sewage flow from individual sewage disposal systems serving single or multiple dwellings of five (5) units or less shall be based on one hundred and fifty (150) gallons per bedroom per day or seventy-five (75) gallons per person per day whichever is greater.

2. Other design flows may be approved by the Environmental Health Manager

upon submission of supporting data and calculations.

.090 Plumbing Code exceptions and superseding provisions:

These rules and regulations shall supersede all conflicting sections in the latest county adopted edition of the California plumbing code.

.100 Authority of Health Officer:

Nothing contained in these rules and regulations shall be construed to prevent the Health Officer or his authorized representative from requiring compliance with higher requirements than those contained herein where such higher requirements are essential to maintain and protect the public health, safety and welfare.

.110 Liability to the County Officials:

These rules and regulations shall not be construed as imposing upon the County or its officials any liability or responsibility for damage resulting from any sewage disposal system as herein provided; nor shall the County or any official employee thereof be held as assuming such liability or responsibility by reason of the activities authorized herein.

.120 Appeals:

In the event that approval of a proposed system is denied by the Health Department, an appeal may be made to the Board of Supervisors whose decisions shall be final. The appeal shall be filed with the Clerk of the Board of Supervisors within ten (10) calendar days following the denial, and shall specifically state the grounds on which the appeal is based.

.130 Violation – Penalty:

Violations of this chapter are misdemeanors punishable as set forth in Chapter 1.08 of Mariposa County Code.

APPENDIX A

MARIPOSA COUNTY HEALTH DEPARTMENT
PROCEDURE FOR PERFORMING PERCOLATION
TESTS IN MARIPOSA COUNTY

1. Dig or bore a hole with minimum diameter of six (6) inches. The bottom of the test hole shall be located at the same depth as the bottom of the proposed leaching field. There shall be at least five (5) feet of undisturbed soil extending around all sides of the percolation test hole.

2. Roughen or score the bottom and sides of the holes to provide a natural surface. Removal all loose material from the hole.

3. Spread two (2) inches of coarse sand or fine gravel into the hole to protect the bottom surface and insert a perforated pipe in the hole. The pipe should be secured in place in order to prevent movement during the test.

4. Pour clean water into the pipe to a minim depth of twelve (12) inches above the bottom of the hole. Recheck the water level in a few hours and refill, if necessary, in order to keep the hole saturated. The hole shall be presoaked for a minimum of 24 hours.

5. After the overnight saturation period, adjust the water level to six (6) inches above the two (2) inch gravel layer. From a fixed reference point, measure the drop in water level at approximately 30 minute intervals (10 minute or shorter intervals in sandy soils.) When the water level within the percolation test hole lowers to four (4) inches, refill back to the six (6) inch level and continue measuring the absorption.
Percolation rates will be considered stabilized when four (4) consecutive readings demonstrate a consistent (less than 20% variance) rate of fall has been obtained. The smallest drop that occurs during the stabilized period will be used to calculate the percolation rate. If gravel is used around the pipe to secure it, then the percolation rate will be adjusted by multiplying the rate X 1.6. Percolation test should be read for no less than three (3) hours for soils containing clay or silt. Tests in sands can be read for one hour.

Copies of the field data must be submitted with reports including date, time of presoaking, date and time of testing, soil type, readings, depth, location and percolation rates.

APPENDIX B

DESIGN CRITERIA
RECOMMENDED RATES OF WASTEWATER
APPLICATION FOR TRENCH AND BED BOTTOM
AREAS[a]

Percolation Rate Application

Soil Texture	**Rate Min/In**	**Rate gpd/ft^2**
Gravel, coarse sand	< 1	Not suitable[c]
Coarse to medium sand	1 - 5	1.2
Fine sand, loamy sand	6 - 15	0.8
Sandy loam	16 - 30	0.6
Loam, porous silt loam	31 - 60	0.45
Silty-clay-loam, clay loam[d]	61 - 120	0.2[e]

b. May be suitable estimates for sidewall infiltration rates.

c. Rates based on septic tank effluent from a domestic waste source. A factor of safety may be desirable for wastes of Significantly different character.

d. Soils with percolation rates 1 min/in. can be used if the soil is replaced with a suitably thick (2 ft) layer of loamy sand or sand.

e. Soils without expandable clays.

f. These soils may be easily damaged during construction.

APPENDIX C

GENERAL GUIDELINES FOR SPECIALLY DESIGNED SYSTEMS

Specially designed systems are applicable where conditions on existing lots do not meet minimum standards as set forth in these rules and regulations. Specially designed systems may be designed by California Registered Sanitarians, Civil Engineers, or Certified Engineering Geologists who are knowledgeable and experienced in the field of on-site sewage disposal.

Each specially designed system must contain the following:

1. Regional or vicinity map.

2. North arrow and scale(s).

3. Plot plan, accurately showing location of improvements, restrictions and slopes.

4. Design details.

5. Specifications for material and workmanship.

6. Soil profile hole logs "Unified Soil Classification System" including description of color, approximate percentages of gravel, sand and fines, moisture content, plasticity or dalatency, structure, cementation, degree of compactness, consistency, mineralogy, typical name and group symbol.

7. Percolation test results, including field data.

8. Calculation sheets, justifying the design.

9. Signature and stamp of registered professional preparing the design.

10. Authorization from owner allowing Health Department personnel to inspect system during normal working hours.

11. Three (3) complete sets of plans, specifications and data must be submitted.

Responsibility for construction inspection lies with the designer. Health Department will, however, perform a preapproval site evaluation, post construction inspections and will monitor the system periodically. After installation, the designer shall certify in writing to the Health Department that the system was located and installed in compliance with the approved plans and specifications. Minor deviations from the approved plan and specifications arising from prior unknown site conditions shall be accurately included in the certification and "as built" plans. Major deviations shall be reported to the Health Department prior to installation and new written approval shall be required.

Specially designed systems must be approved by the County Environmental Health Specialist. Contemporary design practice for non-conventional systems is thoroughly described in several recent publications including:

A. 1979 State of the Art Manual
On-Site Wastewater Management
National Environmental Health Association

B. State Water Resources Control Board Guidelines for Mound and Evapotranspiration Beds.

C. EPA Design Manual - On-Site Wastewater Treatment and Disposal Systems.

APPENDIX D

"USE OF CHAMBERED DEVICES IN LEACHFIELDS

1. As an alternative to drainfields utilizing drainrock and perforated pipe, approved chambered devices constructed for the specific purpose shall be allowed utilizing absorption area calculations detailed below.

2. Drainfield trench absorption area, when chambered devices are utilized, shall be based on the infiltration of side wall area and bottom area utilizing a calculation of the wetted perimeter. The application rate shall be the same as would be used for a drainrock-filled trench on the specific site.

3. Leachfields shall be constructed in such a manner as to divert water from flowing over the leachfield in a sheeting manner that would saturate the leachfield.

4. At least one observation pipe shall be installed in each leachline.

5. Chambers shall not be used in clay soils.

Appendix E

Alternative non-discharge sewage disposal methods

Alternative non-discharge sewage disposal methods include: Composting toilets and incinerating toilets.

Alternative non-discharge sewage disposal methods may be used only under the following circumstances:

1. As a convenience toilet connected with a non-residential secondary structure on owner occupied property. Examples would be a barn or work shop or other non-residential structure.
2. In owner occupied residential structures that are served by a conventional or engineered and fully sized on-site sewage disposal system or a public sewer system.
3. Alternative non-discharge sewage disposal methods may not be used in connection with commercial buildings.
4. A permit is required from the Health Department to construct or install an alternative non-discharge sewage disposal method.
5. Plans for alternative non-discharge sewage disposal methods must be submitted to the Health Department and approved by the County Environmental Health Specialist prior to construction or installation. When plans include a premanufactured unit all of the manufacturers installation and maintenance instructions must be followed.
6. Alternative non-discharge sewage disposal methods shall be maintained in a safe and sanitary way.
7. The Health Department may establish guidelines and/or policies governing the construction, installation and maintenance of alternative non-discharge sewage disposal methods.
8. The Health Department may suspend or revoke the permit for an alternative non-discharge sewage disposal method for violation of any of the above conditions.

MARIPOSA COUNTY

Health · (209) 966-3689

RESOLUTION - ACTION REQUESTED 2017-38

MEETING: January 24, 2017

TO: The Board of Supervisors

FROM: Eric Sergienko, Health Officer

RE: Onsite Wastewater Treatment Systems Local Area Managment Plan

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RECOMMENDATION AND JUSTIFICATION:
PUBLIC HEARING to Consider Authorizing the Environmental Health Manager to Submit the Revised Local Area Management Plan for Onsite Wastewater Treatment Systems for Mariposa County to the Central Valley Regional Water Quality Control Board for Final Approval.

The attached LAMP document describes how Mariposa County handles on-site sewage disposal using existing County Codes, Rules and Regulations pursuant to County Code and Health Department Policies that have been developed over the past 25 years.

BACKGROUND AND HISTORY OF BOARD ACTIONS: Item 5842 In May 2016 the Board authorized the Environmental Health Manager to submit a draft LAMP to the Water Board. The Water Board staff requested minor changes to the LAMP prior to final approval.
In 1990 AB885 was passed by the State Legislature requiring statewide sewage disposal regulations to be adopted. In 2013 the State Water Board adopted a Water Board Policy in place of regulations that is far more restrictive than Mariposa Counties Sewage Disposal Rules and Regulations. The policy allows Counties to submit a Local Area Management Program (LAMP) that describes how sewage disposal will be handled differently than the prescriptive standards in tier 1 of the policy but still be protective of the State's Waters.

ALTERNATIVES AND CONSEQUENCES OF NEGATIVE ACTION:
Do not approve submittal of the LAMP and The County will have to begin following the prescriptive standards in tier 1 of the policy starting May 13, 2018.

ATTACHMENTS:
LAMP Final REDLINE version (PDF)

CAO RECOMMENDATION
Requested Action Recommended

Dallin Kimble
Dallin Kimble, Interim CAO 1/19/2017

RESULT: **ADOPTED [UNANIMOUS]**
MOVER: Kevin Cann, District IV Supervisor
SECONDER: Merlin Jones, District II Supervisor
AYES: Menetrey, Smallcombe, Jones, Long, Cann

MARIPOSA COUNTY

Health · (209) 966-3689

RESOLUTION - ACTION REQUESTED 2017-39

MEETING: January 24, 2017

TO: The Board of Supervisors

FROM: Eric Sergienko, Health Officer

RE: Onsite Wastewater Treatment Systems Rules and Regulations

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RECOMMENDATION AND JUSTIFICATION:
Approve revisions to the Health Department sewage disposal rules as submitted.

The Local Area Management Program (LAMP) is required to be referenced in either county code or rules adopted pursuant to county code before the State's Regional Water Quality Control Board will approve the county's LAMP. The recommended action includes that change as well as a few other changes required by the State and a few changes to bring the rules into alignment with standard practices in the field.

BACKGROUND AND HISTORY OF BOARD ACTIONS: Resolution 84-360 was the original resolution adopting these rules. Resolution 96-41 amended the rules by adding Appendix D.

ALTERNATIVES AND CONSEQUENCES OF NEGATIVE ACTION:
Do not approve the changes to the rules and The County's LAMP will not be approved by the RWQCB and we will have to begin following the prescriptive standards in tier 1 of the Water Board policy on On-site sewage disposal starting May 13, 2018.

ATTACHMENTS:
Rules_and_Regs revised2017_v3.2 (PDF)

CAO RECOMMENDATION
Requested Action Recommended

Dallin Kimble
Dallin Kimble, Interim CAO 1/19/2017

RESULT: **ADOPTED [UNANIMOUS]**
MOVER: Rosemarie Smallcombe, District I Supervisor
SECONDER: Merlin Jones, District II Supervisor
AYES: Menetrey, Smallcombe, Jones, Long, Cann