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Subject: Resolution of External Region Comments, Kern County LAMP

Regions 3, 4, and 6 LAMP Reviewers,

Find attached the current draft LAMP for Kern County and Preliminary Completeness Checklist. In the Checklist, Column I, find issues resolutions for OWTS Policy §§9.1, 9.1.9, 9.1.10, 9.2, 9.2.7, and 9.2.8. These respond to comments from Regions 3 and 6. Due to limited area in Kern County, Region 4 declined to comment. Region 5 staff finds that the Kern County Environmental Health Director has sufficiently addressed the comments. The Director is now seeking Board of Supervisors approval, and appropriate related code and ordinance changes. We will then proceed with consideration of Regional Board approval. Thank you for your insights.

Eric

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Attachments

KCEHD Part 1-Onsite Systems Manual_1317.AR.docx
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KERN COUNTY ONSITE SYSTEMS MANUAL

PART 1

**SITING, DESIGN, AND
CONSTRUCTION REQUIREMENT
FOR OWTS**

Onsite Systems Manual – Part 1

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1.1 Introduction

GENERAL

This part of the Onsite Systems Manual provides technical standards and guidelines for the design and construction of various onsite wastewater treatment and disposal technologies and components as authorized for implementation of Kern County Onsite Wastewater Ordinance, Code **Section _____**. General requirements and principles include the following:

1. Where permitted by County Code **Chapter _____**, the building sewer shall be permitted to be connected to a private sewage disposal system in accordance with the provisions of these technical standards;
2. The type of OWTS shall be determined on the basis of location, soil characteristics, topography, groundwater conditions, and shall be designed to receive all sewage from the building(s) served;
3. The system, except as otherwise approved, shall consist of a septic tank with effluent discharging into a subsurface disposal field, into one or more seepage pits, or into a combination of subsurface disposal field and seepage pits;
4. Provisions are included for the approved use of “engineered” or “alternative systems”, which refers to a type of OWTS that utilizes either a method of wastewater treatment other than a conventional septic tank and/or a method of wastewater dispersal other than conventional drain field trenches or seepage pit(s) for the purpose of producing a higher quality wastewater effluent and improved performance of and siting options for effluent dispersal;
5. No property shall be improved in excess of its capacity to properly treat and absorb sewage effluent by the means provided in County Code and these technical standards;
6. Nothing contained in this section shall be construed to prevent the Director from requiring compliance with additional requirements than those contained herein, where such additional requirements are essential to maintain a safe and sanitary condition.

INSTALLATION PERMIT

A permit must be obtained from the Kern County Environmental Health Division (EHD) to construct, reconstruct, or repair an onsite wastewater treatment and dispersal system. Permits will only be issued in those areas of the County where a sanitary sewer is not available within 200 feet of the structure. OWTS cannot be used if soil

conditions, topography, high groundwater or other factors indicate this method of sewage disposal is unsuitable.

LAND DIVISIONS

OWTS requirements for land divisions contained in Part 5 of this Manual – “Standards, Rules and Regulations for Land Development”. The standards are intended to safeguard the public health, and are enforced by the County’s Environmental Health Division (EHD). They are primarily intended to apply to residential units.

It is the responsibility of the land developer and his/her technical consultants to provide to the EHD any and all data needed to satisfy the content and the intent of these Standards.

For new divisions of land, soil profiles, percolation tests and groundwater determinations will be required on every parcel unless the EHD determines, on a case-by-case basis, that such testing is not necessary due to the availability of sufficient information to demonstrate conformance with applicable siting criteria for all proposed OWTS locations.

OWTS REPAIRS

OWTS that require corrective action to address a current or threatened failure condition shall be repaired in a manner, approved by the EHD that brings the OWTS into substantial conformance with Ordinance requirements to the greatest extent practicable. The repair work shall be implemented as soon as is reasonably possible and in accordance with any time limits issued by the EHD.

The overall goal with all OWTS repairs is to obtain a practical, timely and effective long-term correction to the failure condition. In determining the level of corrective work required, Environmental Health will take into consideration a variety of factors, including:

1. Public health and safety;
2. Soil characteristics and groundwater separation;
3. Setbacks from wells and streams;
4. Ground slope and setback from unstable landforms;
5. OWTS sizing standards;
6. Other setback criteria (e.g., foundations, pipelines, trees).

Submittal requirements for OWTS repairs may vary case-by-case, and will depend on the nature of the failure condition, the property location and type of occupancy, and the type of corrective work needed.

NOTIFICATION TO PUBLIC WATER SUPPLY OWNER(S)

Proposed OWTS. Where EHD staff determines the proposed OWTS dispersal system is closer than 150 feet to a public water well, or closer than 1,200 feet to a public water system surface water intake in a location tributary to the intake, steps will be taken to notify and consider input from the public water supply owner(s) as follows:

1. Notification of the proposed OWTS application will be sent to the water system owner(s). The notification will be accompanied by a copy of the permit application and supporting OWTS design information, including documented soils, topography, groundwater and percolation data.
2. The owner(s) receiving notification of proposed OWTS installations per (1) above will be afforded a 15-day period in which to submit comments on the proposed OWTS application.
3. Prior to issuing an OWTS installation permit for any system per (1) above, EHD will review and consider any comments and recommendations submitted by affected water system owner(s) per (2) above.
4. Upon issuance and/or denial of an OWTS installation permit per (1) above, EHD will provide notification to the affected water system owner(s) of the action taken.

Failing OWTS. Where EHD becomes aware of a failing OWTS located closer than 150 feet to a public water well, or closer than 2,500 feet to a public water system surface water intake in a location tributary to the intake, EHD shall notify the respective owner(s) and the SWRCB Division of Drinking Water as soon as practicable, but no later than 72 hours from the time of discovery of the failing OWTS.

ALTERNATIVE OWTS

General Provisions. Alternative OWTS may be permitted by the EHD for the repair or upgrading of any existing OWTS and for new construction on any legally created parcel where: (a) it is determined that sewage cannot be disposed of in a sanitary manner by a conventional OWTS; (b) EHD determines that an alternative OWTS would provide

equal or greater protection to public health and the environment than a conventional OWTS; or (c) necessary to comply with requirements adopted for Mountain and Groundwater Impact Areas.

Alternative OWTS may be used for land divisions, in accordance with conditions and requirements in Part 5 of this Manual as approved by the EHD.

Types of alternative OWTS permitted are limited to those identified in Part 3 of this Manual, and which have been approved by the EHD and the appropriate CRWQCB.

All alternative systems must be installed by a contractor duly licensed by the Contractors State License Board of the State of California to install OWTS.

Specific Requirements

1. **Design and Installation Permit.** Alternative OWTS require design by a licensed professional and completion of site evaluation and installation permitting as required for conventional OWTS. Additional engineering and design requirements applicable to different types of alternative OWTS are contained in Part 3 of this Manual.
2. **Operating Permits.** A County-issued operating permit is required for all alternative systems. Operating permits are intended to serve as the basis for verifying the adequacy of alternative system performance and ensuring ongoing maintenance, including requirements for system inspection, monitoring and reporting of results to the EHD, along with the requirement for permit renewal, typically on an annual basis.
3. **Performance Monitoring and Reporting.** Performance monitoring and reporting is required for all alternative OWTS in accordance with conditions established by the EHD at part of the operating permit. Performance monitoring requirements are covered in Parts 3 and Part 4 of this Manual.
4. **Design and Construction Guidelines.** Design and construction guidelines for approved alternative treatment and dispersal technologies are provided in Part 3 of this Manual.

VARIANCES

As provided in Kern County OWTS Ordinance, Article 4, variance from the terms of the Ordinance and requirements as prescribed in this Onsite Systems Manual may be granted by the EHD, under the following conditions:

1. The variance will not harm the public health, safety and welfare of the people of Kern County;
2. Due to special conditions or exceptional characteristics of the property, its location or surroundings, a literal enforcement of this chapter and Onsite Systems Manual would result in unnecessary hardship;
3. The hardship was not caused with the intent to avoid the requirements of the Ordinance or Onsite Systems Manual;
4. The variance will not have any adverse environmental effect on the use of the adjoining property.

1.2 Siting Criteria and Site Evaluation

SITING CRITERIA

Approval of any conventional OWTS shall require compliance with the following minimum siting criteria.

1. **Soil Depth.** For conventional OWTS, minimum depth of soil beneath the bottom of the dispersal field shall be 7 feet for leaching trenches or beds, and 12 feet for seepage pits. For alternative OWTS, minimum soil depth may be reduced to 3 feet for trench systems, and 10 feet for seepage pits.
2. **Vertical separation to ground water.** Minimum vertical separation distance between the bottom of the dispersal field shall be 7 feet for leaching trenches or beds, and 12 feet for seepage pits. For alternative OWTS utilizing supplemental treatment, minimum depth to groundwater may be reduced to 2 feet for trench systems, and 10 feet for seepage pits.
3. **Soil Percolation Rate.** For conventional disposal trenches or beds, the average soil percolation rate in the proposed disposal field area shall not be faster than one minute per inch (1 mpi) nor slower than 60 mpi, determined in accordance with procedures prescribed in this Manual. For seepage pits, percolation rates shall not be slower than 25 mpi. Soils having percolation rates between 60 and 120 mpi will require the use of an alternative OWTS, as provided in Article 3 of the County OWTS Ordinance and in accordance with methods and requirements detailed in Part 3 of this Manual.
4. **Ground Slope.** Maximum ground slope in the disposal field area shall not exceed thirty (30) percent.
5. **Horizontal Setbacks.** Minimum horizontal setback distances from various site features to OWTS components shall be as listed in **Table 1-1**.
6. **Areas of Flooding.** OWTS shall not be located in the primary floodplain or “floodway” as determined or estimated from published floodplain maps or on the basis of historical evidence acceptable to the director. OWTS are not permitted in secondary floodplain areas unless: (1) they are protected by flood control devices approved by the Kern County Water Agency or Kern County Department of Public works; (2) they are constructed with appropriate measures to minimize infiltration of floodwaters into the system and discharges from the system into the floodwater.

7. **OWTS Located on Property Served.** OWTS shall be located on the same property as the building(s) being served. An exception may be granted by the Director for existing lots of record, where the OWTS may be located on an adjoining property within a non-revocable easement.

Table 1-1. Minimum horizontal setback distances for OWTS

Site Feature	Minimum Setback Distance (feet)			
	To Bldg. Sewer	To Septic Tank ¹	To Disposal Field	To Seepage Pit
Building or structures	2	5	8	8
Property line adjoining private property	Clear	5	5	8
Non-public water supply wells and springs	50	100	100	150
Public water supply wells	50	150	150 ²	200 ²
Streams (perennial or seasonal flow)				
• General (from top of bank)	50	50	100	100
• Between 1,200 to 2,500 ft. from public water system intake ³	50	100	200	200
• Within 1,200 ft. from public water system intake ³	50	100	400	400
Lakes and Reservoirs (from high water mark)				
• General	50	200	200	200
• Within 1,200 feet from a public water supply intake ³	50	400	400	400
Non-classified stream or drainage ditch	25	25	25	25
Cuts or steep embankments (from top of cut/embankment)	-	10	4 X h ^{4,5}	4 X h ^{4,5}
Unstable land mass	-	100	100 ⁵	100 ⁵
Large trees	-	10	-	10
Seepage pit	-	5	5	12
Disposal field	-	5	4	5
Domestic water line	1	5	5	5
Distribution box	-	-	5	5
Pressure public water main	10	25	25	25

¹ Also applies to supplemental treatment units and pump/dosing tanks;

² 200' for trench or seepage pit >10' deep; 2-yr microbial travel study required for seepage pit >20' deep within 600 feet of public water well, per SWRCB Policy section 9.4.10.3.

³ For areas tributary to and upstream of water supply intake; setback distance measured from high water mark. Exceptions allowed per SWRCB OWTS Policy, as follows: (a) for replacement OWTS, comply to the maximum extent practicable and incorporate supplemental treatment unless director finds no impact or significant threat to water source; (b) for new OWTS on pre-existing lot of record (pre-May 13, 2013), comply to maximum extent practicable and incorporate supplemental treatment for pathogens per sections 10.8 and 10.10 of SWRCB OWTS Policy.

⁴ h equals the height of cut or embankment, in feet.

⁵ Setback distance may be reduced in accordance with recommendations provided in a geotechnical report prepared by a civil engineer or professional geologist.

SITE EVALUATION

Prior to approving the use of an OWTS, a site evaluation is required in all instances to allow proper system design and to determine compliance with the site suitability criteria specified in this Manual. Site evaluations shall be conducted by qualified professionals, and evaluations shall be made in accordance with the following general requirements and referenced procedures. The EHD shall be notified prior to the site evaluation to coordinate with and allow for verification by department staff.

1. **General Site Features.** Site features to be determined by inspection shall include:

- a. Land area available for treatment components and for primary and reserve dispersal fields;
- b. Ground slope in the primary and reserve dispersal area(s);
- c. Location of cut banks, fills, or evidence of past grading activities, natural bluffs, sharp changes in slope, soil landscape formations, and unstable land forms within 100 feet of the primary and reserve dispersal area(s);
- d. Location of wells, streams, and other bodies of water within 200 feet of the primary and reserve dispersal area(s);
- e. To the extent possible, the location of existing OWTS within 100 feet of the primary and reserve dispersal area(s).

2. Soil Profiles

- a. Soil characteristics shall be evaluated by soil profile test pit observations. A minimum of one test pit in the primary dispersal field and one in the reserve area shall be required for this purpose. Additional soil profiles may be required if the initial two profiles show conditions which are dissimilar to the extent that they do not provide sufficient information for design and/or determination of code compliance.
- b. An augured test hole may be an acceptable alternative to a test pit where the EHD determines that:
 - i. The use of a backhoe/excavator is impractical because of access or because of the fragile nature of the soils; or
 - ii. It is necessary only to verify conditions expected on the basis of prior soils investigations; or
 - iii. It is done in connection with geotechnical investigations.

- c. The following factors shall be observed and reported from the ground surface to a limiting condition, up to a minimum of seven (7) feet below the bottom of the proposed dispersal system, which may be reduced to three (3) feet where an alternative OWTS is proposed.
 - i. Thickness and coloring of soil layers, soil structure, and texture according to United States Department of Agriculture (USDA) classification;
 - ii. Depth to a limiting condition such as hardpan, rock strata, impermeable soil layer, or saturated soil conditions;
 - iii. Depth to observed groundwater;
 - iv. Depth to and description of soil mottling (redoximorphic features);
 - v. Other prominent soil features which may affect site suitability, such as coarse fragments, consistence, roots and pores, and moisture content.

3. **Depth to Groundwater Determination.** The anticipated highest level of groundwater in the primary and reserve area shall be estimated:

- a. As the highest extent of soil mottling observed in the examination of soil profiles; or
- b. By direct observation of groundwater levels during the time of year when the highest groundwater conditions are expected or known to occur, i.e., wet weather testing period as defined by the EHD.

Where there is a discrepancy between soil profile indicators (mottling) and direct observations, the direct observations shall govern.

Where the director has been provided adequate evidence to demonstrate suitable soil conditions and groundwater separation, testing requirements may be waived.

4. **Percolation Testing.** Determination of a site's suitability for dispersal of effluent and for OWTS design shall be made by the completion of percolation testing in accordance with procedures approved by the EHD (Manual Part 2).
5. **Land Divisions.** For new divisions of land, soil profiles, percolation tests, and groundwater determinations will be required on every parcel unless the director determines, on a case-by-case basis, that such testing is not necessary due to the availability of sufficient information to demonstrate conformance with

applicable siting criteria for all proposed OWTS locations (See Part 5 of this Manual).

6. **Cumulative Impact Assessment.** Kern County OWTS Ordinance Article 3, authorizes EHD to require the completion of additional technical studies (“cumulative impact assessment”) for OWTS proposals, in situations where cumulative impacts on groundwater and/or watershed conditions are of potential concern. Where required, such studies shall be conducted in accordance with the guidelines provided in Part 1.8 of this Manual. The results shall be submitted for review by EHD as part of the project/site evaluation process, and may be the basis for denial, modification, or imposition of specific conditions for the OWTS proposal, in addition to other siting and design criteria.
7. **Reporting.** All site evaluation information, including test results for primary and reserve dispersal areas, shall be submitted to the EHD with the OWTS permit application.

1.3 Wastewater Design Flows

Daily wastewater flow estimates shall be developed for use in design, evaluation and monitoring of all OWTS.

1. **Single Family Residences and Second Units.** Wastewater flows used for design of OWTS for single family residences and second units shall be based on number of bedrooms in accordance with criteria in **Table 1-2**. Design flows for a primary residence and secondary dwelling unit shall be determined independently, regardless of whether the flows are treated separately or in a combined OWTS.

**Table 1-2.
Wastewater Design Flows for
Single Family Residences**

No. of Bedrooms	Design Flow (gal/day)
1	150
2	300
3	450
4	600
5	675
6	750
>6	+ 75 per bedroom

2. **Multiple Dwelling Units or Apartments.** Wastewater flows used for the design of OWTS for multiunit residences or apartments units shall be based on the number of dwelling units in accordance with criteria in **Table 1-3**.

**Table 1-3.
Wastewater Design Flows for
Multi-Unit Residences**

No. of Dwelling Units	Design Flow (gal/day)
2	600
3	750
4	1,000
5	1,125
6	1,250
7	1,375
8	1,500
9	1,625

10	1,750
>10	+125 per unit

3. **Non-residential Facilities.** Wastewater flows used for design of OWTS for commercial, institutional, recreational and other non-residential facilities shall be the greater of that estimated from the following two methods:

- a. Facility/Occupancy Method - based on the projected activities, occupancy and facilities, using wastewater generation guidelines provided in **Table 1-4**; and
- b. Fixture Unit Method - based on total drainage fixture unit value, per California Plumbing Code (Table 702.1) or the most recent adopted version of the Kern County Plumbing Code (KCPC), and criteria in **Table 1-5**.

For facilities not listed in **Table 1-4** the wastewater design flow shall be estimated based on either: (a) appropriate literature references (e.g., US EPA Onsite Wastewater Treatment Systems Manual, 2002) for the type of facility proposed; or (b) documented wastewater flow monitoring data for a comparable facility. Additionally, the Director may consider adjustment to the criteria listed in **Table 1-4** for specific facilities based upon documented wastewater flow monitoring data. In all cases, the design proposal shall include sufficient technical information to support the proposed design flow estimate. Notwithstanding the above, minimum design flow for any OWTS shall not be less than 150 gpd.

**Table 1-4.
Estimated Wastewater Flow Rates**

Type of Occupancy	Design Flow (gallons per day)
Airports	
- Per employee	15
- Per passenger	5
Auto washers	Per equipment mfg.
Bowling alleys, snack bar only (per lane)	75
Camps (per person)	
- With central comfort station	35
- With flush toilets, no showers	25
- Day camps, no meals served	15
- Summer and seasonal	50
Churches, sanctuary, religious halls (per seat)	
- without kitchen	5
- with kitchen waste	7
Dance halls (per person)	5
Day care (per patron, employee)	15

Factories and industrial buildings (per employee)	
- no showers	25
- with showers	35
- cafeteria, add	5
Hospitals	
- per bed	250
- kitchen waste only (per bed)	35
- laundry waste only (per bed)	5
Type of Occupancy	Design Flow (gallons per day)
Hotels, no kitchen waste (per bed x 2)	60
Institutions (per person)	
- resident	75
- nursing home	125
- rest home	125
Laundries, self-service	
- minimum 10 hours per day (per wash cycle)	50
- commercial	Per manufacturer
Motel (per bed space)	
- no kitchen	50
- with kitchen	60
Offices (per employee)	20
Parks	
- mobile homes (per space)	250
- picnic parks, toilets only (per parking space)	20
- Recreational vehicles (per space)	
• without water hook-up	75
• with water and sewer hook-up	100
Restaurants – cafeterias	
- per employee	20
- toilet (per customer)	7
- kitchen waste (per meal)	6
- add for cocktail lounge (per customer)	2
- kitchen waste – disposable service (per meal)	2
Schools	
- staff and office (per person)	20
- elementary students (per student)	15
- intermediate and high (per student)	20
• with gym and showers,	5
• with cafeteria, add	3
- boarding, total waste (per person)	100
Service station, toilets	3
- for 1 st bay	1000
- add for each additional bay	500
Stores	
- per employee	20
- public restrooms, add per 10 ft ² of floor space	1
Swimming pools, public (per person)	10
Theaters	
- auditoriums (per seat)	5
- drive-in (per space)	10

**Table 1-5.
Estimated Sewage Flow by Fixture Unit Value**

Total Fixture Units per CPC Table702.1	Design Flow¹ (gallons per day)
15	375
20	500
25	600
33	750
45	1,000
55	1,112
60	1,250
70	1,375
80	1,500
90	1,625
100 ²	1,750

¹ Equal to 50% of required septic tank volume; assumes 2-day detention time;

² Additional fixture units over 100, 12.5 gallons per fixture unit

4. **Flow Equalization.** Flow equalization may be used for non-residential and mixed use facilities that experience significant, regular and predictable fluctuations in wastewater flows. Examples of applicable facilities include, but are not limited to:
- a. religious facilities
 - b. schools special event
 - c. venues

Flow equalization is the process of controlling the rate of wastewater flow through an OWTS by providing surge capacity storage and timed-dosing of the incoming flow. Installed following the septic tank, it allows peak surges in wastewater flow (e.g., from a weekend event) to be temporarily stored and metered into the treatment system and/or dispersal field at a relatively even (“average”) rate over an extended number of days (e.g., during the subsequent week). This generally aids OWTS performance.

Where flow equalization is proposed to be incorporated in an OWTS the following apply:

1. The septic tank capacity shall be sized based on the peak daily flow for the facility;

2. The design flow used for sizing supplemental treatment unit(s) and/or the dispersal field may be based on the equalized (“average”) flow rate rather than the peak daily flow rate for the facility;
3. Engineering calculations and specifications must be submitted substantiating the proposed design and operation of the flow equalization system; and
4. An operating permit for the OWTS shall be required and shall include provisions for monitoring and documenting compliance with the flow equalization design parameters.

1.4 Septic Tank Requirements

1. **Capacity.** The liquid capacity of all septic tanks shall conform to Table 1-6 as determined by: (a) the number of bedrooms or apartment units in dwelling occupancies and (b) the estimated waste/sewage design flow rate or the number of plumbing fixture units for non-residential facilities, as determined from the most recent adopted version of the Kern County Plumbing Code, whichever is greater.

**Table 1-6.
Septic Tank Capacity**

Single Family Dwellings # of Bedrooms	Multi-family or Apartments # of Dwelling Units	Other Uses: Maximum Fixture Units per CPC Table 702.1	Minimum Septic Tank Capacity ^{4,5} (gallons)
1 or 2	-	15	750
3	-	20	1,000
4	2 units	25	1,200
5 or 6 ¹	3	33	1,500
-	4	45	2,000
-	5	55	2,225
-	6	60	2,500
-	7	70	2,750
-	8	80	3,000
-	9	90	3,250
-	10 ²	100 ³	3,500

Notes:

- ¹ Additional bedrooms, 150 gallons each
- ² Additional dwelling units, 250 gallons each
- ³ Additional fixture units over 100, 25 gallons per fixture unit
- ⁴ Septic tank sizes in this table include sludge storage capacity and the connection of domestic food waste disposal units without further volume increase.
- ⁵ Minimum capacity determined from estimated wastewater flow shall be equal to at least two (2) days the maximum daily design flow.

2. **Plans.** Plans for septic tanks shall be submitted to the EHD for approval. Such plans shall show dimensions, reinforcing, structural calculations, and such other pertinent data as required.
3. **Design.** Septic tank design shall be such as to produce a clarified effluent consistent with accepted standards and shall provide adequate space for sludge and scum accumulations.
4. **Construction Materials.** Septic tanks shall be constructed of solid durable materials not subject to excessive corrosion or decay and shall be watertight.

5. **Compartments.** Septic tanks shall have not less than two compartments unless otherwise approved by the EHD. The inlet compartment of any septic tank shall be not less than two-thirds of the total capacity of the tank, nor less than 500 gallons liquid capacity, and shall be not less than 3 feet in width and 5 feet in length. Liquid depth shall be not less than 2 feet nor more than 6 feet. The secondary compartment of a septic tank shall have a capacity of not less than 250 gallons and a capacity not exceeding one-third of the total capacity of such tank. In septic tanks having a 1,500 gallon capacity, the secondary compartment shall be not less than 5 feet in length.
6. **Access Manholes**
 - a. Access to each septic tank shall be provided by at least two (2) manholes twenty (20) inches in minimum diameter. One (1) access manhole shall be located over the inlet and one (1) access manhole shall be located over the outlet. Wherever a first compartment exceeds twelve (12) feet in length, an additional manhole shall be provided over the baffle wall.
 - b. Septic tanks shall have the required manholes accessible by extending the manhole openings to grade, or at most 6 inches below finished grade, in a manner acceptable to the EHD.
 - c. Access openings at grade or above shall be locked or secured to prevent unauthorized access.
7. **Pipe Opening Sizes.** The inlet and outlet pipe openings shall not be larger in size than the connecting sewer pipe. The vertical leg of round inlet and outlet fittings shall not be less in size than the connecting sewer pipe nor less than 4 inches. A baffle-type fitting shall have the equivalent cross-sectional area of the connecting sewer pipe and not less than a 4-inch horizontal dimension where measured at the inlet and outlet pipe inverts.
8. **Pipe Extension.** The inlet and outlet pipe or baffle shall extend 4 inches above and not less than 12 inches below the water surface. The invert of the inlet pipe shall be at a level not less than 2 inches above the invert of the outlet pipe.
9. **Free Vent Area.** Inlet and outlet pipe fittings or baffles and compartment partitions shall have a free vent area equal to the required cross-sectional area of the house sewer or private sewer discharging therein to provide free ventilation above the water surface from the disposal field or seepage pit through the septic tank, house sewer, and stack to the outer air.
10. **Sidewalls.** The sidewalls shall extend not less than 9 inches above the liquid depth. The cover of the septic tank shall be not less than 2 inches above the back vent openings.

11. **Partitions and Baffles.** Partitions or baffles between compartments shall be of solid, durable material and shall extend not less than 4 inches above the liquid level. The transfer port between compartments shall be a minimum size equivalent to the tank inlet, but in no case less than 4 inches in size, shall be installed in the inlet compartment side of the baffle so that the entry into the port is placed 65 percent to 75 percent in the depth of the liquid. Wooden baffles are prohibited.
12. **Effluent Filter.** Septic tanks shall be designed to prevent solids in excess of three-sixteenths (3/16) of an inch in diameter from passing to the dispersal system. Septic tanks that use a NSF/ANSI Standard 46 certified septic tank effluent filter at the final point of effluent discharge from the OWTS and prior to the dispersal system shall be deemed in compliance with this requirement.
13. **Structural Design.** The structural design of septic tanks shall comply with the following requirements:
 - a. Each such tank shall be structurally designed to withstand all anticipated earth or other loads. Septic tank covers shall be capable of supporting an earth load of not less than 500 pounds per square foot (lb. /ft²) where the maximum coverage does not exceed 3 feet.
 - b. In flood hazard areas, tanks shall be anchored to counter buoyant forces during conditions of the design flood. The vent termination and service manhole of the tank shall be not less than 2 feet above the design flood elevation or fitted with covers designed to prevent the inflow of floodwater or the outflow of the contents of the tanks during conditions of the design flood.
14. **Materials.** The materials used for constructing a septic tank shall be in accordance with the following:
 - a. Materials used in constructing a concrete septic tank shall be in accordance with applicable standards in the most recent adopted version of the Kern County Plumbing Code.
 - b. Septic tanks constructed of alternate materials shall be permitted to be approved by the EHD where in accordance with approved applicable standards. Wooden septic tanks are prohibited.
15. **Prefabricated Septic Tanks.** Prefabricated septic tanks shall comply with the following requirements:
 - a. Manufactured or prefabricated septic tanks shall comply with approved applicable standards and be approved by the EHD.
 - b. Independent laboratory tests and engineering calculations certifying the tank capacity and structural stability shall be provided as required by the EHD.

16. Septic tanks shall be limited to those approved by the IAPMO or stamped and certified by a California registered civil engineer as meeting the industry standards, and their installation shall be according to the manufacturer's instructions.

17. **Water-tightness Testing Requirements.** Septic tanks or other primary components shall be filled with water to flow line prior to requesting inspection. Seams or joints shall be left exposed (except the bottom), and the tank shall remain water-tight. All new septic tank installations and modifications to existing septic tanks shall undergo water-tightness testing as follows:

- a. **Tanks Located in Areas of Shallow Groundwater or Flooding.** The testing shall be done with the access risers in place and the inlet and outlet pipes plugged. The tank shall be filled with water to a level extending a minimum of two (2) inches into the risers, and monitored for a 1-hour period, with no measurable drop in the water level.
- b. **All Other Tanks.** The tank shall be filled with water to a level even with the invert of the outlet pipe, and monitored for a 1-hour period, with no measurable drop in water level.

1.5 Conventional Disposal Trenches and Beds

1. General

The construction dimensions of the subsurface sewage effluent disposal area of an onsite wastewater treatment system shall be based on soils analysis and/or percolation tests.

2. Sizing

- a. **Minimum Effective Absorption Area.** The minimum effective absorption area required shall be sufficient for absorption of the daily quantity of liquid waste discharging there into, determined per **Table 1-7**, based on either (1) the required septic tank capacity in gallons (liters), and/or (2) the estimated daily waste/sewage flow, whichever is greater.
- b. **Absorption Capacity.** The absorption capacity of disposal trenches and beds shall be based on the effective absorption area (per below) and the percolation characteristics of the underlying and surrounding soil, as determined from results of field exploration and design criteria in **Table 1-7**.
- c. **Effective Absorption Area.** The effective absorption area of a disposal trench shall normally be calculated as the bottom width. Sidewall area in excess of the required 12 inches and not exceeding 36 inches below the leach line shall be permitted to be added to the trench bottom area where computing absorption areas.
- d. **Leaching Beds.** Where leaching beds are permitted in lieu of trenches, the area of each such bed shall be not less than 50 percent greater than the requirements for trenches. Perimeter sidewall area in excess of the required 12 inches and not exceeding 36 inches below the leach line shall be permitted to be added to the trench bottom area where computing absorption areas.
- e. **Leaching Chambers.** Leaching chambers shall be sized on the bottom absorption area (nominal unit width) in square feet.

**Table 1-7
Design Criteria of Five Typical Soils**

Type of Soil	Required Square Feet for leaching area per 100 gallons tank capacity	Maximum Absorption Capacity in gal/ft ² of leaching area for a 24-hour period
Coarse sand or gravel	20	5.0
Fine sand	25	4.0
Sandy loam or sandy clay	40	2.5
Clay with considerable sand or gravel	90	1.1
Clay with small amount of sand or gravel	120	0.8

3. Construction

Disposal fields shall be constructed in accordance with **Table 1-8.**

**Table 1-8.
General Disposal Field Requirements**

Item	Minimum	Maximum
Number of drain lines per field	1	-
Length of each line	-	100 feet
Bottom width of trench	18 inches	36 inches
Spacing of lines, center-to-center	6 feet	-
Depth of earth cover of lines	12 inches	-
Grade of lines	Level	Inches per 100 ft.
Filter material under drain lines	12 inches	-
Filter material over drain lines	2 inches	-

4. **Distribution Lines.** Distribution lines shall be constructed of perforated ABS pipe, perforated PVC pipe, or other materials approved by the Director, provided that sufficient openings are available for distribution of the effluent into the trench area.
5. **Filter Material.** Before placing filter material or drain lines in a prepared excavation, all smeared or compacted surfaces shall be removed by raking to a depth of one (1) inch and the loose material removed. Clean stone, gravel, slag, or similar material acceptable to the Director, varying in size from three fourths (3/4) inch to two and one-half (2-1/2) inches shall be placed in the trench to the depth and grade required by this section. Drain pipe shall be placed on the filter material in an approved manner. The drain lines shall then be covered with filter material to the minimum depth required by this section and this covered with material approved by the Director to prevent closure of voids with earth backfill. No earth backfill shall be placed over the filter material until after inspection and acceptance.

Exception: Plastic leaching chambers approved by the EHD may be used in lieu of pipe and filter material. Chamber installations shall follow the rules for disposal fields, where applicable, and shall conform to manufacturer's installation instructions.

6. **Capped Inspection Riser.** A capped inspection riser, typically consisting of 3" or 4" perforated pipe, shall be installed within each trench to provide a means of observing the effluent level in the trench.
7. **Grade Board.** A grade board staked in the trench to the depth of filter material shall be utilized when the distribution line is constructed of material which will not maintain alignment without continuous support.
8. **Distribution Boxes.** Where two or more drain lines are installed, an approved distribution box of sufficient size to receive lateral lines shall be installed at the head of each disposal field. The inverts of outlets shall be level, and the invert of the inlet shall be not less than 1 inch above the outlets. Distribution boxes shall be designed to ensure equal flow and shall be installed on a level concrete slab in natural or compacted soil.
9. **Laterals.** Laterals from a distribution box to the disposal field shall be approved pipe with watertight joints. Multiple disposal field laterals, where practicable, shall be of uniform length.
10. **Connections.** Connections between a septic tank and a distribution box shall be laid with approved pipe with watertight joints on natural ground or compacted fill.

11. Spacing

- a. Minimum spacing between trenches or leaching beds shall be not less than 4 feet plus 2 feet for each additional foot of depth in excess of 1 foot below the bottom of the drain line.
 - b. Distribution drain lines in leaching beds shall be not more than 6 feet apart on centers, and no part of the perimeter of the leaching bed shall exceed 3 feet from a distribution drain line.
 - c. When seepage pits are used in combination with disposal fields, the filter material in the trenches shall terminate at least five (5) feet from the seepage pit excavation.
12. **Surface Covering.** Disposal fields, trenches, and leaching beds shall not be paved over or covered by concrete or a material that is capable of reducing or inhibiting a possible evaporation of sewer effluent.

Exceptions: Exceptions may be granted under the following conditions:

- (a) for soil Types 2 or 3: disposal trench sizing shall be increased by 25% or disposal trenches shall be constructed using traffic-rated chambers with no sizing reduction credit as normally given for chambers;
- (b) for soil Types 4 or 5: disposal trench sizing shall be increased by 25% and the trenches shall be constructed using traffic-rated chambers, with no sizing reduction credit;
- (c) for soil Types 2 through 5: no sizing increase or chamber construction requirement would apply if supplemental treatment is provided;
- (d) for any large flow OWTS (>1,500 gpd design flow), supplemental treatment is required except where the portion of trench installed under paved area amounts to less than 25% of the total system capacity.

13. **Joints.** Where necessary on sloping ground to prevent excessive line slope, leach lines or leach beds shall be stepped. The lines between each horizontal section shall be made with watertight joints and shall be designed so each horizontal leaching trench or bed shall be utilized to the maximum capacity before the effluent shall pass to the next lower leach line or bed. The lines between each horizontal leaching section shall be made with approved water-tight joints and installed on natural or unfilled ground.

14. **Dosing Tanks.** Automatic siphon or dosing tanks shall be installed when required or as permitted by the EHD. Minimum requirements include the following:

- a. Horizontal setbacks for dosing siphon tanks shall be the same as for septic tanks; and
- b. Designer submittal requirements shall be the same as for pump systems, including hydraulic design calculations, selection of dosing siphon and dosing tank, copy of manufacturer data sheet(s), operation and maintenance guidelines.

1.6 Seepage Pit Requirements

1. Sizing

- a. **Effective Absorption Area.** The effective absorption area of any seepage pit shall be calculated as the excavation sidewall area in square feet (m²) below the inlet, excluding impermeable soil zones where identified during field exploration.
- b. **Absorption Capacity.** The absorption capacity of seepage pits shall be based on the effective absorption area per (a) and the percolation characteristics of the surrounding soil, as determined from results of field exploration and design criteria in **Table 1-7**.
- c. **Minimum Effective Absorption Area.** The minimum effective absorption area required shall be sufficient for absorption of the daily quantity of liquid waste discharging there into, determined per **Table 1-7**, based on either (1) the required septic tank capacity in gallons (liters), and/or (2) the estimated daily waste/sewage flow, whichever is greater.
- d. **Multiple Pits and Disposal Combinations.** The minimum required absorption area may be provided in one or more seepage pits or in combination with other dispersal methods, e.g., trenches, beds.

2. Multiple Installations

- a. **Level Sites.** Multiple seepage pit installations on level sites (where the inlet pipe elevations are the same) shall be served through an approved distribution box. Distribution boxes shall have their locations permanently marked with a steel post, concrete marker or other durable material. Additionally, each distribution box shall have an inspection riser of white PVC or concrete of at least eight (8) inches in diameter. The inspection riser shall allow inspection access to the distribution box. Each riser shall terminate with an approved screw type cap.
- b. **Sloping Sites.** For multiple seepage pit installations on sloping sites where the inlet pipe elevations differ, the distribution piping shall be designed to provide serial overflow from one pit to another (highest to lowest elevation).

3. Construction

- a. Each seepage pit shall be circular in shape and shall have an excavated diameter of not less than four (4) feet. Approval shall be obtained prior to construction for any pit having an excavated diameter greater than six (6) feet.

4. Spacing

- a. Minimum horizontal spacing between seepage pits shall be 12 feet, measured from sidewall to sidewall.
- b. When seepage pits are used in combination with disposal fields, the filter material in the trenches shall terminate at least five (5) feet from the seepage pit excavation.

5. Lining

Seepage pits may be constructed in one of two ways, as follows:

- a. An eight (8) inch (204 mm) white, or other similar approved color, sewer pipe of approved material shall be installed true and plumb in the center of the seepage pit excavation extending from the bottom of the seepage pit excavation to the inlet depth. The sewer pipe shall have one (1) inch holes drill each 120 degrees of the sewer pipe circumference at twelve (12) inch intervals on center minimum for the entire length of the sewer pipe to the inlet depth. The sewer pipe shall then extend watertight to grade and shall be capped with an approved screw type, accessible cap. The void between the sewer pipe and the seepage pit excavation shall then be filled with clean stone, gravel, or similar filter material acceptable to the EHD, varying in size from the three fourths (3/4) inch to two and one-half (2-1/2) inches.
- b. Pre-cast concrete circular sections approved by the EHD may be used. The void between the pre-cast circular sections and the seepage pit excavation shall have a minimum of six (6) inches of clean three-fourths (3/4) inch gravel or rock filter material. An approved type one or two piece reinforced concrete slab cover shall be installed on top of the pre-cast concrete circular sections. Each such cover shall have twenty- five hundred (2,500) pounds per square inch minimum compressive strength shall be not less than five (5) inches thick and shall be designed to support an earth load of not less than four hundred (400) pounds per square foot. Each such cover shall be provided with an eight (8) inch minimum inspection hole and shall be coated on the underside with an approved bituminous or other ~~nonpermeable~~no permeable protective compound. An eight (8) inch white, or similar approved color, sewer pipe of approved material shall be installed true and plumb extending watertight from the cover inspection hole to grade and shall be capped with an approved accessible cap.

6. Sidewall.

A seepage pit shall have a minimum sidewall of 10 feet below the inlet.

7. Cover

The cover of a seepage pit shall be constructed and located as follows:

- a. Approved-type one or two-piece reinforced concrete slabs of not less than 2,500 lb./in² minimum compressive strength, not less than 5 inches thick, and designed to support an earth load of not less than 400 pounds per square foot (lb./ft²). Each such cover shall be provided with a 9 inch minimum inspection hole with plug or cover and shall be coated on the underside with an approved bituminous or other non-permeable protective compound.
- b. The top of the arch or cover shall be not less than 18 inches but not exceed 4 feet below the surface of the ground.

8. Inlet Fitting

An approved vented inlet fitting shall be provided in the seepage pit so arranged as to prevent the inflow from damaging the sidewall.

Exception: Where using a one- or two-piece concrete slab cover inlet, fitting shall be permitted to be a one-fourth bend fitting discharging through an opening in the top of the slab cover. On multiple seepage pit installations, the outlet fittings shall comply with paragraph 2 above.

1.7 Construction Inspection and Testing

At a minimum, inspection of conventional OWTS installation should include the items listed below.

1. Pre-construction inspection where the construction staking or marking of the various system components is provided and construction procedures discussed;
2. Open trench inspection of dispersal trench dimensions and conditions;
3. Drain rock and perforated pipe materials and placement;
4. Location and proper installation of diversion valve(s);
5. Location, size, materials, and water-tightness testing of septic tank per Section 1.4.16 of this Manual; and

Final Inspection to verify that all construction elements are in conformance with the approved plans and specifications, and final trench backfill/cover and erosion control has been completed.

Any field changes to the approved OWTS design shall be documented in a set of “as-built” drawings supplied to EHD by the system designer, which shall be required before final written notice of installation approval is issued by EHD.

Additional requirements pertaining to inspection and testing of Alternative OWTS installations are detailed in Part 3 of this Manual.

1.8 Cumulative Impact Assessment Guidelines

1. **General Provisions.** County OWTS Ordinance Article 3 authorizes EHD to require the completion of additional technical studies (“cumulative impact assessment”) for OWTS proposals in situations where cumulative impacts on groundwater and/or watershed conditions are of potential concern. Cumulative impacts from OWTS may occur due to such factors as the constituent levels in the wastewater (e.g., nitrogen content), the volume of wastewater flow, the density of OWTS discharges in a given area, and/or the sensitivity and beneficial uses of water resources.

Cumulative impact assessments to address potential concerns shall be conducted in accordance with the requirements outlined in these guidelines. The results of the assessment shall be submitted for review by EHD and may be the basis for denial, modification or imposition of specific conditions for the OWTS proposal, in addition to other siting and design criteria.

2. **Cumulative Impact Issues.** The primary issues to be addressed in cumulative impact assessments will normally include the following:
 - a. **Groundwater Mounding.** A rise in the water table, referred to as “groundwater mounding”, may occur beneath or down-gradient of OWTS as a result of the concentrated or high volume of hydraulic loading from one or more systems in a limited area.
 - b. **Groundwater Nitrate Loading.** Discharges from OWTS contain high concentrations of nitrogen that may contribute to rises in the nitrate level of local and regional aquifers.

For individual cases, EHD may identify and require analysis of cumulative impact issues other than those listed above which could pose potential water quality, public health, or safety risks.

3. **Qualifications.** Cumulative impact assessments required for alternative system proposals shall be performed by or under the supervision of one of the following licensed professionals:
 - a. Registered Civil Engineer
 - b. Registered Environmental Health Specialist
 - c. Registered Geologist

Additionally, the licensed professional assuming responsibility for the cumulative impact assessment should have training and experience in the fields of water quality and hydrology acceptable to the EHD.

4. **Cases Requiring Cumulative Impact Assessment.** All new development proposed within the Lahontan Regional Water Quality Control Board basin shall require a cumulative impact assessment. Other cases where cumulative impact assessments shall be required are listed in **Table A**. Additionally, EHD reserves the right to require the completion of a cumulative impact assessment in any case where, special circumstances related to the size, type, or location of the OWTS warrant such analysis.

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**Table A.
Projects Requiring Cumulative Impact Assessment***

Type of Project	Lot Size (acres)	Design Wastewater Flow (gpd)	Groundwater Mounding Analysis	Nitrate Loading Analysis
Residence, including 2 nd dwelling unit(s)	-	< 750	No	No
Residence, including 2 nd dwelling unit(s)	< 1	750 +	No	Yes
Multiunit and Non-residential	< 1	750 +	No	Yes
	< 2	1,500+	Yes	Yes
	< 3	2,000+	Yes	Yes
	-	1,500+	Yes	Per lot size criteria No
	-	2,500+	Yes	Yes
Subdivisions	2.5+	-	No	No
	<2.5	-	No	Yes

*Note: EHD may also require cumulative impact assessment based on project or site specific conditions.

** The hydrological and water quality analysis requirements may be modified depending on site specific conditions and the extent to which the OWTS discharge contributes flow to catchment area supporting the vernal pool.

5. Methods

a. Groundwater Mounding Analysis

- i. Analysis of groundwater mounding effects shall be conducted using accepted principles of groundwater hydraulics. The specific methodology shall be described and supported with accompanying literature references, as appropriate.

- ii. Assumptions and data used for the groundwater mounding analysis shall be stated along with supporting information. A map of the project site showing the location and dimensions of the proposed system(s) and the location of other nearby OWTS, wells and relevant hydrogeologic features (e.g., site topography, streams, drainage channels, subsurface drains, etc.) shall be provided.
- iii. The wastewater flow used for groundwater mounding analyses shall be the design sewage flow, unless supported adequately by other documentation or rationale.
- iv. Groundwater mounding analyses shall be used to predict the highest rise of the water table and shall account for background groundwater conditions during the wet weather season.
- v. All relevant calculations necessary for reviewing the groundwater mounding analysis shall accompany the submittal.
- vi. Any measures proposed to mitigate or reduce the groundwater mounding effects shall be presented and described as to their documented effectiveness elsewhere, special maintenance, monitoring requirements, or other relevant factors.

6. Nitrate Loading

- a. Analysis of nitrate loading effects shall, at a minimum, be based upon construction of an annual chemical-water mass balance. The specific methodology shall be described and supported with accompanied literature references as appropriate.
- b. Assumptions and data for the mass balance analysis shall be stated, along with supporting information. Such supporting information should include, at a minimum:
 - i. climatic data (e.g., precipitation, evapotranspiration rates);
 - ii. groundwater occurrence, depth and flow direction(s);
 - iii. background groundwater quality data, if available;
 - iv. soil conditions and runoff factors;
 - v. wastewater characteristics (i.e., flow and nitrogen content); and,
 - vi. other significant nitrogen sources in the impact area (e.g., livestock, other waste discharges, etc.).
- c. A map of the project siting showing the location and dimensions of the proposed system(s) and the location of other nearby OWTS, wells and

relevant hydrogeologic features (e.g., site topography, streams, drainage channels, subsurface drains, etc.) shall be provided.

- d. The wastewater flow (average) used for nitrate loading analyses shall be as follows, unless adequately supported by other documentation or rationale:
 - i. For individual residential systems: 50 gpd/bedroom;
 - ii. For multi-family residential systems and other non-residential systems: average monthly wastewater flow for the proposed OWTS;
- e. Minimum values used for the total nitrogen concentration of septic tank effluent shall be as follows, unless supported adequately by other documentation or rationale:
 - i. Residential wastewater: 70 mg/l
 - ii. Non-residential wastewater: as determined from sampling of comparable system(s) or from literature values.

EHD may require the use of more conservative values than cited above if the values are judged (by EHD) not likely to be representative of the proposed system(s).

- f. All relevant calculations necessary for reviewing the nitrate loading analysis shall accompany the submittal.
- g. Any measures proposed to mitigate or reduce the nitrate loading effects shall be presented and described as to their documented effectiveness elsewhere, special maintenance or monitoring requirements or other relevant factors.

7. Evaluation Criteria

- a. **Groundwater Mounding.** The maximum acceptable rise of the water table for short periods of time (e.g., one to two weeks) during the wet weather season, as estimated from groundwater mounding analyses, shall be as follows:
 - i. General Requirement for all OWTS. Groundwater mounding shall not result in more than a 50-percent reduction in the required minimum depth to seasonally high groundwater per Part 2.2 of this Manual, as applicable, for the type of OWTS and site conditions. For example, where a 5-foot vertical separation to the native groundwater level is required, a short-term “mounding” rise of the water table to within 2.5 feet of trench bottom would be acceptable

during peak wet weather conditions. At no time shall groundwater rise to within 2 feet of trench bottom.

- ii. Requirement for Large Systems. Notwithstanding (a) above, for all OWTS with design flows of 2,500 gpd or more (i.e., "large systems"), the groundwater mounding analysis shall demonstrate that the minimum required groundwater separation, per Part 2.2 of this Manual, will be maintained beneath the system during peak wet weather conditions.

EHD may require, in any individual case or in specific geographical areas, a minimum of 2 feet of groundwater clearance ("mounded" conditions) where deemed necessary for protection of public health, or based upon specific requirements or recommendations of the Regional Water Board.

- b. **Nitrate Loading.** Minimum criteria for evaluating the cumulative nitrate loading from proposed OWTS shall be as follows:

- i. For Areas Served By Individual Water Wells.

- (a) Existing Lots of Record: New OWTS on existing lots of record shall not cause the groundwater nitrate-nitrogen concentration to exceed 7.5 mg-N/L at the nearest existing or potential point of groundwater withdrawal (e.g., water well location);

- (b) New Subdivisions: The total loading of nitrate from new subdivisions shall not result in an average groundwater nitrate-nitrogen concentration over the geographical extent of the subdivision that exceeds 7.5 mg-N/L.

- c. For Areas Not Served by Individual Water Wells.

- i. Existing Lots of Record: OWTS installed on existing lots of record shall not cause the groundwater nitrate-nitrogen concentration to exceed 10 mg-N/L at the nearest existing or potential point of groundwater withdrawal (e.g., water well location); and

- ii. New Subdivisions. The total loading of nitrate from new subdivisions shall not result in an average groundwater nitrate-nitrogen concentration over the geographical extent of the subdivision that exceeds 10 mg-N/L.

EHD may require, in any individual case or specific geographical areas, more stringent nitrate-nitrogen compliance criteria when deemed

necessary for protection of public health, or based on specific requirements or recommendations of the RWQCB.

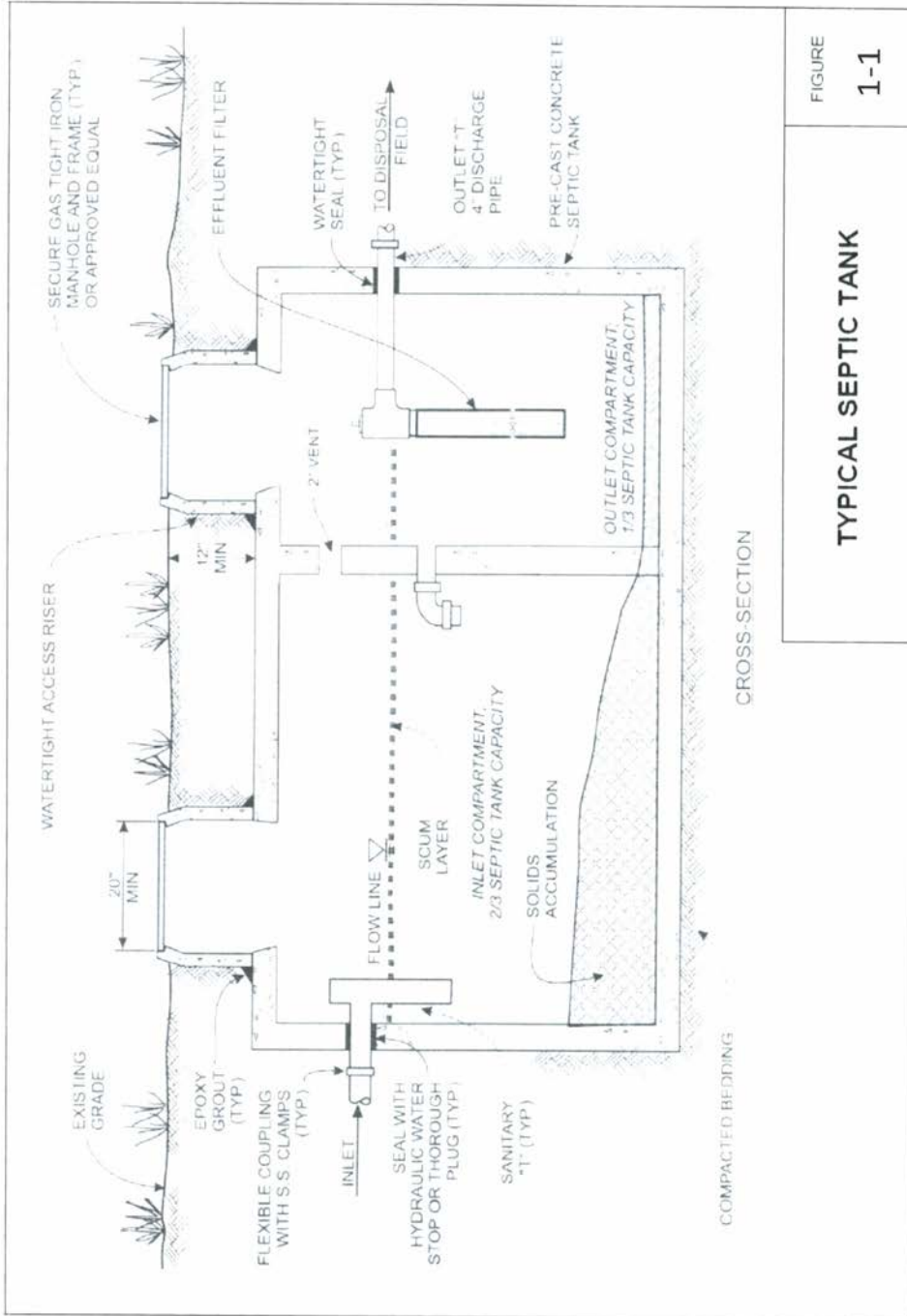
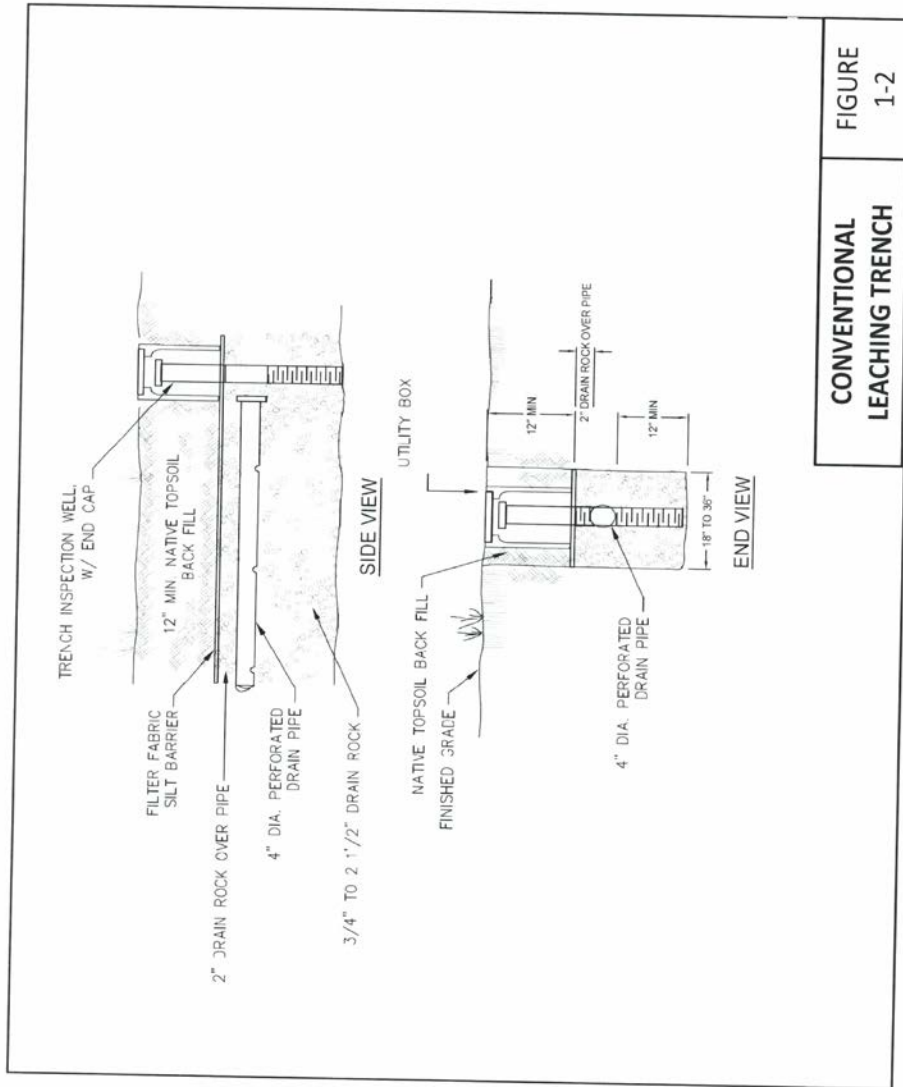


FIGURE
1-1

TYPICAL SEPTIC TANK



CONVENTIONAL LEACHING TRENCH **FIGURE 1-2**

Region 5 Checklist for Kern Co

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Note: Pink colored text is a comment specific to Lahontan on follow-up needs after Region 5 LAMP Adoption

OWTS Policy Section	Column	Entry
3.3	OWTS Policy Section Summary	Annual Reporting
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	Section 6, p.43
	Legal Authority/ Code Section -	Article 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
3.3.1	OWTS Policy Section Summary	Complaints
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	Include numbers and locations of complaints, related investigations, and means of resolution.
	Relevant LAMP Section	Section 6, p. 41 and 43
	Legal Authority/ Code Section -	Article 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via	

	emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
3.3.2	OWTS Policy Section Summary	OWTS Cleaning
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	Include applications and registrations issued as part of the local cleaning registration pursuant to California Health and Safety Code §117400 et seq.
	Relevant LAMP Section	Section 6, p. 40
	Legal Authority/ Code Section -	Article 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
3.3.3	OWTS Policy Section Summary	Permits for New and Replacement OWTS
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	Include numbers and locations of permits for new and replacement OWTS, and their Tiers.
	Relevant LAMP Section	Section 6, p. 40, 43
	Legal Authority/ Code Section -	Article 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	OWTS Policy Section 3.3.3 requires permits for new and replacement OWTS to specify Tier. (We would not object to showing Tier 2 as a default.)
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	Kern Co EHD concurs.
	Follow-up to External Region Comments:	
3.4	OWTS Policy Section Summary	Permanent Records

	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	Section 6, p. 40
	Legal Authority/ Code Section -	Article 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
3.5	OWTS Policy Section Summary	Notifications to Municipal Water Suppliers
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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 [sic].
	Relevant LAMP Section	Section 4 p. 35 and OSM p. 4
	Legal Authority/ Code Section -	Article 1, OSM - Part 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	Also cite definition of Failure, Article 1, page 3, and Table 1-1, Minimum horizontal setback distances for OWTS, OSM page 8.
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	Kern Co EHD concurs.
	Follow-up to External Region Comments:	

9	OWTS Policy Section Summary	Minimum OWTS Standards
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	This Section is an introduction; we require no specific LAMP Section citation here.
	Relevant LAMP Section	
	Legal Authority/ Code Section -	
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.1	OWTS Policy Section Summary	Considerations for LAMPs
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	Sections 2 & 4
	Legal Authority/ Code Section -	Articles 1-4, OSM - Parts 1 & 4
	Deficiency; Address Prior to Our Scheduling for Board Approval	Cite Water Quality Management Measures, pages 15 -18 and Figures 2-4 and 2-5, and Water Quality Assessment Program, pages 40-42. Based on discussions to date with CCDEH, general minimum scope for Water Quality Assessment Reports should generally include; State community small water systems (e.g., Golden Hills CSD), Geotracker GAMA-secure, monitoring wells from permitted facilities, and private domestic wells - but only if Kern County routinely requires sampling, for example as proof of potable water.
	Potential Concern; Address in First Water Quality Assessment Report	We are soliciting comments from Local Agencies on a straw-man reporting requirements spreadsheet.

		Please contact Leslie Lindbo, Yolo County, Brad Banner, Butte County, and Ray Ruminski, Lake County
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	Golden Hills CSD IS not a Local Primacy Agency; Kern Co. EHD cannot require data as a small community water system there. Kern Co EHD to draft text that further defines jurisdiction of LPA and non-LPA system. In Water Quality Assessment Reports, Kern Co. EHD to further discuss trend data in existing well network (see Fig 2-5 in LAMP). Also, Kern Co has 9 incorporated cities; to date Kern Co EHD has no MOU with these; therefore some might require their own LAMPS. Kern Co EHD to approach cities for MOUs. Bakersfield may opt not to enter an MOU with the county.
	Follow-up to External Region Comments:	In response to comment from Region 3 regarding potential need for formal MOUs between incorporated cities and counties, California Conference of Directors of Environmental Health surveyed members and found few instances where counties would have insufficient authority without an MOU. For example, Kern Co EHD has specifically followed up with City of Bakersfield and confirmed its authority to regulate seepage pits within the incorporated boundary. In response to comment during the teleconference from Region 6 regarding access to water quality data from non-LPA community water systems, DDW requires monitoring and data should be accessible through Geotracker GAMA-secure. Regarding subsequent Item 1 in Region 6's 8 August 2016 memo, the LAMP now focuses on areas of concern, related supply and monitoring wells, and contingences for maintenance districts or zones generally based on future nitrate loading, OWTS densities, and induced groundwater recharge, and

		considers a numerical model after Izbicki et al (2015). See also 28 December 2016 email from Mike Coony.
9.1.1	OWTS Policy Section Summary	Degree of vulnerability due to local hydrogeology
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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).
	Relevant LAMP Section	Section 2 & 3, Appendix A
	Legal Authority/ Code Section -	Article 3, OSM - Parts 1, 2, and 6
	Deficiency; Address Prior to Our Scheduling for Board Approval	Cite Professional, Contractor, and Maintenance Provider Qualifications, page 30. Note that, dependent on work performed, the OWTS Policy also considers Soil Science of America Certified Soil Scientists as Qualified Professionals. Cite Site Evaluations for OWTS, page 22, and OSM Part 1, Section 1.2, Siting Criteria and Site Evaluation, pages 7-11. (Typo, page 11, refers to Colusa County).
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16	Kern Co EHD to follow up.

	meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.1.2	OWTS Policy Section Summary	High quality waters and other environmental conditions requiring enhanced protection
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	Section 2, Appendix A & B
	Legal Authority/ Code Section -	Article 3, OSM - Parts 1 & 5
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.1.3	OWTS Policy Section Summary	Shallow soils requiring non-standard dispersal systems
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	Sections 2 & 3, Appendix A
	Legal Authority/ Code Section -	Article 3, OSM Parts - 1, 2, 3, and 5
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.1.4	OWTS Policy Section Summary	High domestic well usage areas
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	Sections 2 & 3 p. 17, Appendix B
	Legal Authority/ Code Section -	Article 3, OSM - Parts 1, 2, 3, and 5
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16	

	meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.1.5	OWTS Policy Section Summary	Fractured bedrock
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	Sections 2 & 3 p. 22, Appendix A
	Legal Authority/ Code Section -	Article 3, OSM - Parts 1, 2, 3, and 5
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.1.6	OWTS Policy Section Summary	Poorly drained soils
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	Sections 2 & 3
	Legal Authority/ Code Section -	Article 3, OSM - Parts 1, 2, 3, and 5
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.1.7	OWTS Policy Section Summary	Vulnerable surface water
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	Our key potential concern is eutrophication of fresh surface water. While typically with relatively low mobility in groundwater and recently informally banned in dishwasher detergents, phosphate is a common cause. At minimum, describe appropriate qualified professionals who will consider potential pathways of wastewater-sourced phosphate and other nutrients toward potentially threatened nearby surface bodies.
	Relevant LAMP Section	Sections 2 & 3
	Legal Authority/ Code Section -	Article 3, OSM - Part 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	Does Kern County have any waterfront properties with OWTS, for example near Lake Isabella? Have any of these areas shown evidence of eutrophication?
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	Kern Co has several ski lakes; eutrophication in these is likely due to agriculture, rather than OWTS. Also, Lake Isabella has shown recent eutrophication, likely due to lower DO during drought, rather than OWTS. Kern CO EHD is unaware of OWTs related eutrophication. No further discussion required at this time.
	Follow-up to External Region Comments:	

9.1.8	OWTS Policy Section Summary	Impaired water bodies
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	Sections 2 & 4
	Legal Authority/ Code Section -	N/A
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.1.9	OWTS Policy Section Summary	High OWTS density areas
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	Section 2, Appendix B
	Legal Authority/ Code Section -	Article 3, OSM - Parts 1 & 5
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	Regarding Item 2 in Region 6's 8 August 2016 memo, the LAMP now requires cumulative impact assessments for parcels less than 2.5

		acres; see also a 28 December 2016 email from Mike Coony.
9.1.10	OWTS Policy Section Summary	Limits to parcel size
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	At minimum, consider hydraulic mounding, nitrate and pathogen loading, and sufficiency of potential replacement areas.
	Relevant LAMP Section	Section 2
	Legal Authority/ Code Section -	Article 3, OSM - Parts 1 & 5
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	OSM Section 602-13, page 11, gives minimum lot size of 2.5 acres for parcels with private domestic wells, based on local average annual rainfall likely consistent with OWTS Policy Tier 1. (An applicant can demonstrate support for smaller size of 1 acre.) However, for subdivisions with piped potable water, Standards, Rules and Regulations for Land Divisions Part 5, Section 602-2.1 p. 6, gives minimum allowable lot size of 10,000 square feet (sf, 0.23 acres) except in desert valley or foothill areas, where, based on specific conditions, gives minimum lot size of 7,200 sf (0.16 acres), substantially less than Tier 1 standards; see OWTS Policy Section 7.8, Table 1. Have any of these smaller parcels shown long term issues, for example shortages of replacement area?
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	Kern Co has seepage pits on small parcels, some of which predate any standards. Kern Co EHD requires system upgrades upon failures, and closely regulates new OWTS on small parcels. No further discussion required at this time.
	Follow-up to External Region Comments:	Regarding Item 3 in Region 6's 8 August 2016 memo, while the LAMP excludes a historical MOU the with Lahontan Region, proposed density controls and cumulative impact assessments are more restrictive than the MOU; see also a 28 December 2016 email from Mike Coony.
9.1.11	OWTS Policy Section Summary	areas with OWTS that predate

		adopted standards
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	This refers to areas with known, multiple existing OWTS.
	Relevant LAMP Section	Section 2 p. 29, Appendix B
	Legal Authority/ Code Section -	Articles 1 & 3, OSM - Parts 1 & 3
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.1.12	OWTS Policy Section Summary	areas with OWTS either within prescriptive, Tier 1 setbacks, or within setbacks that a Local Agency finds appropriate
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	This refers to areas with known, multiple existing OWTS.
	Relevant LAMP Section	Section 2, Appendix B
	Legal Authority/ Code Section -	Articles 1 & 3, OSM - Parts 1 & 3
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.2	OWTS Policy Section Summary	Scope of Coverage:
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	For Section 9.2 et sew, 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.
	Relevant LAMP Section	Sections 1 & 3, p. 6
	Legal Authority/ Code Section -	Articles 1 & 3, OSM - Parts 1, 2, 3, and 5
	Deficiency; Address Prior to Our Scheduling for Board Approval	Cite Section1, Introduction and Background, Introduction, page 3, with scope to 10,000 gpd, Table 1-1, page 6, with referral to Regional Board for projected flow >2,500 gpd, Draft OWTS Ordinance, Article 1, page 1 (May 2016), with proposed referral to Regional Board for OWTS >2,500 gpd. Please further clarify among all sections; we presume that Kern County currently retains lead on OWTS to 10,000 gpd, but proposes to refer OWTS >2,500 gpd to the appropriate Regional Board (i.e., 3,4, 5, or 6) for review, therefore potential transfer of lead.
	Potential Concern; Address in First Water Quality Assessment Report	While a Local Agency's prerogative to refer OWTS <10,000 gpd to a Regional Board, if we were to assume lead, lacking alternative we would likely use State Board General Order 2014-0153 DWQ, for small domestic wastewater systems. We would ask the applicant to file a Report of Waste Discharge for our review. This might entail longer processing times and higher fees than a county permit. Therefore, we suggest your consideration of potential referral on a case-by-case basis, generally based on threat to water quality and complexity of treatment system. If we were to assume lead, we would request Kern County's continued assistance with site inspections.
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	Kern CO EHD concurs and will follow up. Text should give specific conditions for referrals to the Regional Boards of OWTS >2,500 gpd projected flow.
	Follow-up to External Region Comments:	Regarding Item 4 in Region 6's 8 August 2016 memo and their

		subsequent discussions with Kern Co EHD, the Lahontan Region no longer requires an edit. While Regional Boards have no design approval authority, staffs can provide technical input. See also a 28 December 2016 email from Mike Coony.
9.2.1	OWTS Policy Section Summary	Installation and Inspection Permits
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	Sections 3 & 4
	Legal Authority/ Code Section -	Article 2, OSM - Parts 1, 2, 3, and 4
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.2.2	OWTS Policy Section Summary	Special Provision Areas and Requirements near Impaired Water Bodies
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	Sections 2 & 4
	Legal Authority/ Code Section -	N/A
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F,	

	Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.2.3	OWTS Policy Section Summary	LAMP Variance Procedures
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	Section 4 p 28-29
	Legal Authority/ Code Section -	Article 4, OSM - Part 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.2.4	OWTS Policy Section Summary	Qualifications for Persons who Work on OWTS
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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:
	Relevant LAMP Section	Section 4 p. 30-31
	Legal Authority/ Code Section -	Articles 1 & 3, OSM - Parts 1, 2, 3, and 4
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	

	Follow-up to External Region Comments:	
9.2.5	OWTS Policy Section Summary	Education and Outreach for OWTS Owners
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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 webpage.
	Relevant LAMP Section	Section 4 p. 31
	Legal Authority/ Code Section -	Articles 1 & 3, OSM - Parts 2 through 6
	Deficiency; Address Prior to Our Scheduling for Board Approval	OWTS Policy Section 9.2.5 in part requires Local Agencies to provide homeowners with sufficient information to address critical maintenance, repairs, and parts replacements within 48 hours of failure. We suggest posting after-hours contact information for local service providers on your website.
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	Kern Co EHD concurs, and will update website.
	Follow-up to External Region Comments:	
9.2.6	OWTS Policy Section Summary	Septage Disposal
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	Assess existing and proposed disposal locations, and their adequacy.
	Relevant LAMP Section	Section 4, p. 32
	Legal Authority/ Code Section -	Article 1, OSM - Part 7
	Deficiency; Address Prior to Our Scheduling for Board Approval	

	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.2.7	OWTS Policy Section Summary	Maintenance Districts and Zones
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	Section 4, p. 33
	Legal Authority/ Code Section -	Articles 1 & 3, OSM - Part 5
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	If Golden Hills CSD or other local Homeowners Associations were to become special management districts what assurances would Kern County require for financial resources, stability, and professional qualifications?
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	Kern Co has few Special Management Districts. Funding for monitoring is often an issue; County Waste Management oversees these on a case-by-case basis. For non-LPA systems (e.g., Golden Hills), Kern Co EHD allows self monitoring; however DDW requires data, which should become available on Geotracker GAMA secure. No further discussion required at this time.
	Follow-up to External Region Comments:	Regarding a comment from Region 6 during the teleconference on water

		quality data access, Kern County Waste Management and non-LPA self-monitoring program data should both be available on Geotracker GAMA-secure.
9.2.8	OWTS Policy Section Summary	Regional Salt and Nutrient Management Plans
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	Consider development and implementation of, or coordination with, Regional Salt and Nutrient Management Plans; see also State Board Resolution 2009-0011:
	Relevant LAMP Section	Section 4 p. 33, Appendix B
	Legal Authority/ Code Section -	Article 3, OSM - Parts 1 & 5
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	Based on Water Quality Assessment Reports, we may require further monitoring for EC, TDS, and general minerals.
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	Kern Co EHD to include requirements from pending Salt and Nutrient Management Plans.
	Follow-up to External Region Comments:	Regarding Item 5 in Region 6's 8 August 2016 memo, the LAMP now acknowledges the Salt and Nutrient Management Plan for Antelope Valley, Plan in progress for the Indian Wells Valley. See also a 28 December 2016 email from Mike Coony.
9.2.9	OWTS Policy Section Summary	Watershed Management Groups
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	Coordinate with volunteer well monitoring programs and similar watershed management groups.
	Relevant LAMP Section	Section 4 p. 33, Appendix B
	Legal Authority/ Code Section -	
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton	

	and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.2.10	OWTS Policy Section Summary	Proximity of Collection Systems to New or Replacement OWTS
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	Evaluate proximity of sewer systems to new and replacement OWTS. See also Section 9.4.9.
	Relevant LAMP Section	Section 4
	Legal Authority/ Code Section -	Article 2, OSM - Part 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.2.11	OWTS Policy Section Summary	Public Water System Notification prior to permitting OWTS Installation or Repairs
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	Give your notification procedures to inform public water services of pending OWTS installations and repairs within prescribed setback distances.
	Relevant LAMP Section	Section 4 p. 34-35, and OSM p. 4
	Legal Authority/ Code Section -	Article 3, OSM - Part 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	Also Cite Table 1-1, Minimum horizontal setback distances for OWTS, OSM page 8.
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via	Kern Co EHD concurs.

	emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.2.12	OWTS Policy Section Summary	Policies for Dispersal Areas within Setbacks of Public Wells and Surface Water Intakes
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	Discuss supplemental treatments; see Sections 10.9 and 10.10. A Local Agency can propose alternate criteria; however we will need rationale in detail.
	Relevant LAMP Section	Section 4 p. 35-39
	Legal Authority/ Code Section -	Article 3, OSM - Parts 1, 3, and 4
	Deficiency; Address Prior to Our Scheduling for Board Approval	Also Cite Table 1-1, Minimum horizontal setback distances for OWTS, OSM page 8.
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	Kern Co EHD concurs.
	Follow-up to External Region Comments:	
9.2.13	OWTS Policy Section Summary	Cesspool Discontinuance and Phase-Out
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	Provide plans and schedule.
	Relevant LAMP Section	Section 4 p. 36
	Legal Authority/ Code Section -	Article 3, OSM - Part 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	Does Kern County have any cesspools? What time schedule for destruction would the county require upon discovery?
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	Based on recent information from the Erskine Fire, Kern Co does have occasional cesspools in remote areas. Kern Co EHD requires destruction as soon as possible. No further discussion required at this time.

	Follow-up to External Region Comments:	
9.3	OWTS Policy Section Summary	Minimum Local Agency Management Responsibilities:
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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:
	Relevant LAMP Section	Section 6
	Legal Authority/ Code Section -	Article 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.3.1	OWTS Policy Section Summary	Permit Records, OWTS with Variances
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	Describe your records maintenance; numbers, locations, and descriptions of permits where you have granted variances.
	Relevant LAMP Section	Section 6
	Legal Authority/ Code Section -	Article 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.3.2	OWTS Policy Section Summary	Water Quality Assessment Program:
	Region 5 Comments (These do not replace	In the Water Quality Assessment

	your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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:
	Relevant LAMP Section	Sections 2 & 6, Appendix B
	Legal Authority/ Code Section -	Article 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	See previous comments on OWTS Policy Section 9.1. Minimum scope would generally include; State small community wells, Geotracker GAMA-secure, monitoring wells from permitted facilities, and private domestic wells - but only if Kern County routinely requires sampling.
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	See previous discussion, OWTS Policy Section 9.1. Data from Golden Hills CSD and similar non-LPA systems should become available on Geotracker GAMA secure; DDW requires uploads. Kern Co EHD has an extensive database of various potable water supply wells, and will further evaluate in Water Quality Assessment Reports.
	Follow-up to External Region Comments:	
9.3.2.1	OWTS Policy Section Summary	Domestic Well Sampling
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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).
	Relevant LAMP Section	Section 6 p. 42
	Legal Authority/ Code Section -	Article 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.3.2.2	OWTS Policy Section Summary	Domestic Well Sampling, Routine Real Estate Transfer Related
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	This applies only if those samples are routinely performed and reported.
	Relevant LAMP Section	Section 6 p. 42
	Legal Authority/ Code Section -	Article 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton	

	and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.3.2.3	OWTS Policy Section Summary	Water Quality of Public Water Systems
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	Reviews can be by you or another municipality.
	Relevant LAMP Section	Section 6 p. 42
	Legal Authority/ Code Section -	Article 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.3.2.4	OWTS Policy Section Summary	Domestic Well Sampling, New Well Development
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	This applies if those data are reported.
	Relevant LAMP Section	Section 6 p. 42
	Legal Authority/ Code Section -	Article 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	

9.3.2.5	OWTS Policy Section Summary	Beach Water Quality Sampling, H&S Code §115885
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	Public beaches include those on freshwater.
	Relevant LAMP Section	Section 6
	Legal Authority/ Code Section -	Article 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.3.2.6	OWTS Policy Section Summary	Receiving Water Sampling Related to NPDES Permits
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	This refers to existing data from other monitoring programs.
	Relevant LAMP Section	Section 6 p. 42
	Legal Authority/ Code Section -	Article 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.3.2.7	OWTS Policy Section Summary	Data contained in California Water Quality Assessment Database
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	This refers to existing data from other monitoring programs.
	Relevant LAMP Section	Section 6 p. 42

	Legal Authority/ Code Section -	Article 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.3.2.8	OWTS Policy Section Summary	Groundwater Sampling Related to Waste Discharge Requirements
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	This refers to existing data from other monitoring programs.
	Relevant LAMP Section	Section 6 p. 42
	Legal Authority/ Code Section -	Article 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.3.2.9	OWTS Policy Section Summary	Groundwater Sampling Related to GAMA Program
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	This refers to existing data from other monitoring programs.
	Relevant LAMP Section	Section 6 p. 42
	Legal Authority/ Code Section -	Article 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton	

	and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.3.3	OWTS Policy Section Summary	Annual Status Reports Covering 9.3.1-9.3.2
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	Section 6
	Legal Authority/ Code Section -	Article 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.4	OWTS Policy Section Summary	Not Allowed or Authorized in LAMP:
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	For Section 9.4 et seq, ensure that your LAMP covers prohibitions.
	Relevant LAMP Section	Section 5
	Legal Authority/ Code Section -	Articles 1 through 3
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via	

	emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.4.1	OWTS Policy Section Summary	Cesspools
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	Local Agencies cannot authorize cesspools of any kind or size.
	Relevant LAMP Section	Section 5 p. 36
	Legal Authority/ Code Section -	Article 3
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.4.2	OWTS Policy Section Summary	Projected Flow>10,000 gpd
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	Apply professional judgment to further limit projected flows.
	Relevant LAMP Section	Section 5
	Legal Authority/ Code Section -	Article 1, OSM - Part 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.4.3	OWTS Policy Section Summary	Effluent Discharges Above Post-Installation Ground Surface
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more	For example, Local Agencies cannot authorize effluent disposal using sprinklers, exposed drip lines, free-

	detailed than in the Policy.)	surface wetlands, and ponds.
	Relevant LAMP Section	Section 5
	Legal Authority/ Code Section -	Article 1 (Definitions)
	Deficiency; Address Prior to Our Scheduling for Board Approval	OSM Section 4.1, OWTS Performance Requirements, C Supplemental Treatment, 2. Sand Filters, appears to allow occasional ponded effluent on the distribution bed infiltrative surface. D, Alternative Dispersal Systems, 2, Mound, At-Grade, and Raised Sand Bed Systems, similarly appears to allow occasional ponded effluent within the perimeter of a system. Please further clarify; OWTS Policy Section 9.4.3 prohibits effluent discharges above the ground surface.
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	Kern Co EHD to further clarify and amend; Kern Co EHD does not allow ponded effluent.
	Follow-up to External Region Comments:	
9.4.4	OWTS Policy Section Summary	Installation on Slopes >30% without Registered Professional's Report
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	See also earlier comments, Section 9.1.1, regarding potential geotechnical concerns.
	Relevant LAMP Section	Section 5
	Legal Authority/ Code Section -	Articles 1 & 3, OSM - Part 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	

9.4.5	OWTS Policy Section Summary	Decreased Leaching Area for IAPMO-Certified Dispersal System with Multiplier <0.70
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	Section 5
	Legal Authority/ Code Section -	Articles 1 & 3, OSM - Part 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.4.6	OWTS Policy Section Summary	Supplemental Treatments without Monitoring and Inspection
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	Therefore, ensure that the LAMP describes periodic inspection and monitoring for OWTS with supplemental treatments.
	Relevant LAMP Section	Section 5
	Legal Authority/ Code Section -	Articles 1 & 3, OSM - Parts 1, 3, and 4
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	

9.4.7	OWTS Policy Section Summary	Significant Wastes from RV Holding Tanks
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	Section 5
	Legal Authority/ Code Section -	Article 1 (Definitions)
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.4.8	OWTS Policy Section Summary	Encroachment Above Groundwater
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	Section 5 p. 38
	Legal Authority/ Code Section -	Articles 1 & 3, OSM - Parts 1 & 2
	Deficiency; Address Prior to Our Scheduling for Board Approval	In the LAMP, Section 5, Prohibitions, page 38, does not allow vertical separation <2 feet of groundwater and dispersal fields, <10 for seepage pits,

		consistent with OWTS Policy Section 9.4.8. However, the OSM, Section 1.8, Cumulative Impact Assessment Guidelines, F Evaluation Criteria, 1, Groundwater Mounding, a, page 32, allows a short term rise of water table to 1.5 feet below a dispersal trench. Please further clarify.
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	Kern Co EHD to further clarify and amend; Kern Co EHD does not allow encroachment of groundwater <2 feet below dispersion trenches.
	Follow-up to External Region Comments:	
9.4.9	OWTS Policy Section Summary	Installations Near Existing Sewers
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.)
	Relevant LAMP Section	Section 5
	Legal Authority/ Code Section -	Article 2, OSM - Part 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.4.10	OWTS Policy Section Summary	Minimum Setbacks:
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	These setbacks are from public water systems.

	Relevant LAMP Section	Section 5
	Legal Authority/ Code Section -	Article 3, OSM - Part 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.4.10.1	OWTS Policy Section Summary	From Public Supply Wells
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	If the dispersal system is less than 10' in depth, then the setback must be greater than 150' from public water supply well.
	Relevant LAMP Section	Section 5
	Legal Authority/ Code Section -	Article 3, OSM - Part 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.4.10.2	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.)	If the dispersal system is greater than 10' in depth, then the setback must be greater than 200' from public water supply well.
	Relevant LAMP Section	Section 5
	Legal Authority/ Code Section -	Article 3, OSM - Part 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton	

	and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.4.10.3	OWTS Policy Section Summary	From Public Supply Wells, Regarding Pathogens
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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'.
	Relevant LAMP Section	Section 5
	Legal Authority/ Code Section -	Article 3, OSM - Part 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.4.10.4	OWTS Policy Section Summary	From Public Surface Water Supplies
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	Section 5
	Legal Authority/ Code Section -	Article 3, OSM - Part 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16	

	meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.4.10.5	OWTS Policy Section Summary	From Public Surface Water Supplies
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	If the dispersal system is greater than 1,200,'but less than 2,500,' from public water system's surface water intake, within its drainage catchment, and potentially threatens an intake, then the setback must be greater than 200' from high water mark of surface water body.
	Relevant LAMP Section	Section 5
	Legal Authority/ Code Section -	Article 3, OSM - Part 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.4.11	OWTS Policy Section Summary	Supplemental Treatments, Replacement OWTS That Do Not Meet Minimum Setback Requirements
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	Replacement OWTS shall meet minimum horizontal setbacks to the maximum extent practicable.
	Relevant LAMP Section	Section 5
	Legal Authority/ Code Section -	Article 3, OSM - Part 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental	

	Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.4.12	OWTS Policy Section Summary	Supplemental Treatments, New OWTS That Do Not Meet Minimum Setback Requirements
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	Section 5
	Legal Authority/ Code Section -	Article 3, OSM - Part 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.5	OWTS Policy Section Summary	Technical Support of LAMP
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	Appendix A
	Legal Authority/ Code Section -	Article 1
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental	

	Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	
9.6	OWTS Policy Section Summary	Regional Water Quality Control Board Consideration of LAMP
	Region 5 Comments (These do not replace your review of OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	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.
	Relevant LAMP Section	
	Legal Authority/ Code Section -	
	Deficiency; Address Prior to Our Scheduling for Board Approval	
	Potential Concern; Address in First Water Quality Assessment Report	
	Resolution, 19 Jul 16 meeting/teleconference with Donna Fenton and Amy Rutledge, Kern Co. Environmental Health, Howard Kolb, Reg 3, Jay Cass and Mike Cooney, Reg 6, Katie Carpenter, R5F, Eric Rapport, R5R, and 28, 29 Dec 2016 via emails to Amy Rutledge and from Mike Coony.	
	Follow-up to External Region Comments:	