County of Riverside Department of Environmental Health
Environmental Protection and Oversight Division
Land Use and Water Resources Program

LOCAL AGENCY MANAGEMENT PROGRAM for ONSITE WASTEWATER TREATMENT SYSTEMS

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PREFACE

INTRODUCTION

The Local Agency Management Program (LAMP) is the culmination of the actions required by Assembly Bill 885 (AB 885) which was approved on September 27, 2000. This legislation directed the State Water Resources Control Board (State Water Board) to develop regulations or standards for Onsite Wastewater Treatment Systems (OWTS) to be implemented by qualified local agencies. The State Water Board adopted the *Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems* on June 19, 2012 (OWTS Policy). The policy was subsequently approved by the Office of Administrative Law and became effective on May 13, 2013.

The OWTS Policy provides for a tiered structure (Tiers 0-4) for the classification of new and existing OWTS as follows and described further in the OWTS policy:

- Tier 0 - Existing OWTS that are properly functioning
- Tier 1- Low risk new or replacement OWTS that meet design and siting requirements
- Tier 2 – Local Agency Management Program for new or replacement OWTS
- Tier 3 – Existing or new or replacement OWTS near impaired water bodies
- Tier 4 – OWTS that require corrective action or are presently failing.

The complete OWTS Policy can be found at the following link:
http://www.waterboards.ca.gov/water_issues/programs/owts/docs/owts_policy.pdf

As authorized in Tier 2 *Local Agency OWTS Management Program,* Riverside County may propose for Colorado River Basin Regional Water Quality Control Board (Colorado River Basin Water Board) review and approval, alternative standards for the siting, design operation and maintenance of OWTS. This document constitutes Riverside County's submittal of the Tier 2 LAMP for discharge flows at or below 10,000 gallons per day and containing less than 900 milligrams-per-liter of BOD. It is designed to supersede the Department Technical Guidance Manual. Within Tier 3 areas requiring an Advanced Protection Management Program (APMP), the Department will implement a permitting program consistent with the default requirements in Section 10 of the OWTS policy. Tier 3 default requirements are applicable to new or replacement OWTS within 600 feet of impaired water bodies as listed in Attachment 2 of the OWTS policy. Additionally Tier 4 requirements are addressed in Chapter 10 of the LAMP.

PURPOSE

This LAMP will allow for the continued use of OWTS within the jurisdiction of Riverside County and the expansion of the local program to permit and regulate alternative OWTS while protecting water quality and public health. The information provided in this LAMP will help protect groundwater sources and surface water bodies from contamination by providing standards for the proper design, placement, installation, maintenance and assessment of individual OWTS.

APPLICABILITY

This LAMP applies to onsite wastewater systems with waste flows less than 10,000 gallons per day in all of the unincorporated areas of Riverside County. This LAMP also includes incorporated cities which have established agreements with Riverside County.

GEOGRAPHY

Riverside County is located in Southern California and lies east of Orange County, north of San Diego and Imperial Counties, and south of San Bernardino and Los Angeles Counties. Riverside County is the fourth largest county in the state, encompassing approximately 7,400 square miles and extending westward from the Colorado River to within 14 miles of the Pacific Ocean, a stretch of some 200 miles. Riverside County is roughly equivalent in size to the State of New Jersey. The County of Riverside contains a spectacular array of diverse geographical features including deserts, mountains, brush-covered wildlands, and agricultural lands. Elevations range from three hundred feet below sea level (Salton Sea) to ten thousand feet above it. Terrain varies across the County with areas of igneous and metamorphic bedrock exposures forming the steep slopes of the San Jacinto Mountains and areas of weathered granitic rocks as seen in Joshua Tree National Park and the hillsides near the city of Riverside.

Alluvial (river) valleys between mountain ranges contain sediments with significant variation in thickness. Some valleys are filled with a few hundred feet of sediments and others, such as the Coachella, San Jacinto and Elsinore Valleys, contain several thousand feet to several miles of sediment. Set among this rich landscape is a variety of established and/or growing urban, suburban and rural communities.

Approximately 10 percent of the county area lies within 24 incorporated cities. Land use authority within these incorporated cities rests with the cities. The large majority of the County (90 percent) thus lies within unincorporated territory (covering 6,568 square miles or 4,203,761 acres). Of this unincorporated area, 1,335,258 acres (29 percent of unincorporated lands) are held by private landowners, while approximately 2,876,705 acres or 62 percent of the unincorporated land within the County is either held or managed by county, state, federal entities, or tribal land.

DEFINITIONS

“303 (d) list” means the same as "Impaired water bodies."

“Alternative treatment system” or “Alternative OWTS” or “ATU” shall mean any Onsite Wastewater Treatment System (OWTS) that does not meet the criteria of a conventional OWTS, but is allowed under conditions specified by the Department.

“Approval” shall mean the written approval by the Director or his designated representative of a plan to install, construct, reconstruct, convert or alter any OWTS which discharges or disposes of sewage, sewage effluent, or non-hazardous waste.

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

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

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

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

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

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

“Clay” means a soil particle; the term also refers to a type of soil texture. As a soil particle, clay consists of individual rock or mineral particles in soils having diameters <0.002 mm. As a soil

texture, clay is the soil material that is comprised of 40 percent or more clay particles, not more than 45 percent sand and not more than 40 percent silt particles using the USDA soil classification system.

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

“Contractor State License Board” means a certificate, permit, registration, or any other authorization issued by the Contractor State License Board, Department of Consumers Affairs.

“Construction permit” shall mean a permit issued by the Department authorizing the permittee to install, construct, reconstruct, convert or alter any OWTS per Riverside County Ordinance 650.

“Conventional septic system” shall mean an OWTS consisting of a septic tank and a Department approved subsurface gravity dispersal system.

“Critical area” shall mean those areas determined to be difficult for installation of an OWTS due to, but not limited to one or more of the following: lot size, seasonal groundwater, slope, poor soil conditions or impaired water basins.

“Deep boring” means an exploratory boring or excavation performed to provide additional information including soil type, moisture, depth to the water table, perched or otherwise, rock or an impervious strata.

“Department” shall mean the Riverside County Department of Environmental Health.

“Director” shall mean the Director of the Department of Environmental Health or his or her designated representative.

“Dispersal system” means a leach field, seepage pit, subsurface drip field, or other type of system for final wastewater treatment and subsurface discharge.

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

“Domestic well” means a groundwater well that provides water for human consumption and is

not regulated by the State Water Board, Division of Drinking Water.

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

"Earthen material" means a substance composed of the earth's crust (i.e. soil and rock).

"EDF" see "electronic deliverable format."

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

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

"Escherichia coli" or "E. coli" means a group of bacteria predominantly inhabiting the intestines of humans or other warm-blooded animals, but also occasionally found elsewhere. It can be used as an indicator of human fecal contamination.

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

"Expansion area" shall mean the amount of dedicated space equal in size to an existing or proposed OWTS that is capable of supporting an OWTS and will replace at least 100% of the primary OWTS when necessary.

"Failure" shall mean a condition of an OWTS that threatens public health or water quality by creating a potential for direct or indirect contact between sewage and the public. Examples of failure include:

1. Sewage leaking to ground surface or groundwater;
2. Sewage backing up into a structure caused by slow OWTS soil absorption of septic tank effluent;
3. Inadequately treated sewage causing pollution of groundwater or surface water;
4. Noncompliance with standards stipulated in the permit issued for the OWTS based upon the protection of human health, water quality and the environment.

"Flowing water body" means a body of running water flowing over the earth in a natural water course, where the movement of the water is readily discernible or if water is not present it is

apparent from review of the geology that when present it does flow, such as in an ephemeral drainage, creek, stream, or river.

"Graywater" is untreated household wastewater that has not come into contact with toilet waste. Graywater includes used water from bathtubs, showers, and bathroom wash basins, and water from clothes washers and laundry tubs. It shall not include wastewater from kitchen sinks or dishwashers.

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

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

"Holding tank" shall mean a sewage facility, of a temporary nature, that has no means of discharge and requires periodic maintenance and shall have a renewable operating permit issued by the Department.

"IAPMO" means the International Association of Plumbing and Mechanical Officials.

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

"Local agency" means Riverside County Department of Environmental Health.

"Major repair" shall mean OWTS improvements or corrective work where such improvements involve the replacement, enlargement, or modification of a septic tank, treatment unit, or dispersal system (excluding non-perforated distribution pipes), regardless of whether or not a failure condition exists. Such repairs shall require a construction permit from the Department.

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

"New OWTS" means an OWTS permitted after the effective date of this LAMP.

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

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

"Onsite wastewater treatment system(s)" or "OWTS" shall mean any individual onsite wastewater treatment, pretreatment and dispersal system including, but not limited to, a conventional or alternative OWTS having a subsurface discharge.

"Operating permit" shall mean an annual permit issued by the Department authorizing the permittee to operate an OWTS.

"Percolation test" or "Perc test" means a method of testing water absorption of the soil to establish the dispersal system design.

"Permit" shall mean either a construction permit or operating permit as defined within this section.

"Person" shall mean any individual, firm, association, organization, partnership, business trust, corporation, company, State agency or department, or unit of local government.

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

"Professional of record" or "PR" means an individual certified by the State of California as a Professional Engineer (PE), Professional Geologist (PG) or Registered Environmental Health Specialist (REHS) who has accepted responsibility for the design of the OWTS including any required grading. The Professional of Record will have affixed his/her signature and stamp to the system plans and plan proposal.

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

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

"Qualified service provider" or "QSP" is a State Licensed Contractor with knowledge and competency in OWTS design, construction, operation, maintenance and monitoring through experience and/or education.

"Regional Water Board" is any of the Regional Water Quality Control Boards designated by Water Code Section 13200. Depending on the site specific location of the OWTS Regional Water

Board reference in this document may refer to the Colorado River Basin Water Board, the Santa Ana Water Board or the San Diego Water Board. Any reference to an action of the Regional Water Board in this Policy also refers to an action of its Executive Officer, including the conducting of public hearings, pursuant to any general or specific delegation under Water Code Section 13223.

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

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

“Sewage" or “Sewage Effluent” shall mean waste as defined in Section 5410(a), California Health and Safety Code. "Waste" includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation of whatever nature.

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

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

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

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

“Soil” is the naturally occurring body of porous mineral and organic materials on the land surface, and is composed of unconsolidated materials above bedrock. Soil is composed of sand-sized, silt-sized, and clay-sized particles mixed with varying amounts of larger fragments and organic material. The various combinations of particles differentiate specific soil textures identified in the USDA Soil Classification Chart. Soil shall contain earthen material having more than 50% of its volume composed of particles smaller than 0.08 inches (2mm) in size.

“Soil structure” means the arrangement of primary soil particles into compound particles, peds,

or clusters that are separated by natural planes of weakness from adjoining aggregates.

“Soil texture” means the soil class that describes the relative amount of sand, clay, silt and combinations thereof as defined by the classes of the soil textural triangle developed by the USDA (referenced above).

“State Water Board” is the State Water Resources Control Board, headquarters at 1001 ‘I’ St, Sacramento, CA.

“System certification” is an expression of professional opinion that the OWTS, or its components, meet industry standards that are the subject of the certification but do not constitute a warranty or guarantee, either expressed or implied. System Certifications shall be performed by a QSP using forms and procedures established or approved by the Director.

“Telemetric” means the ability to automatically measure and transmit OWTS data by wire, radio, or other means.

“TMDL” is the acronym for "total maximum daily load." Section 303(d)(1) of the Clean Water Act requires each State to establish a TMDL for each impaired water body to address the pollutant(s) causing the impairment. In California, TMDLs are usually adopted as Basin Plan amendments and contain implementation plans detailing how water quality standards will be attained.

“Total coliform” means a group of bacteria consisting of several *genera* belonging to the family *Enterobacteriaceae*, which includes Escherichia coli bacteria.

“Uniform Plumbing Code” or “UPC” shall refer to the current edition of the International Association of Plumbing and Mechanical Officials (IAPMO) Uniform Plumbing Code.

“Waste discharge requirement” or “WDR” means an operation and discharge permit issued for the discharge of waste pursuant to Section 13260 of the California Water Code.

“Weathered bedrock” is rock that has been exposed to the atmosphere at or near the earth’s surface and changed in color, texture, composition, firmness, and/or form as a result of the exposure with little or no transport of loosened or altered material. For purposes of this LAMP, weathered bedrock is not soil.

CHAPTER 1 – ONSITE WASTEWATER TREATMENT SYSTEM REPORT FOR LAND DIVISION (TRACTS & PARCEL MAPS)

An Onsite Wastewater Treatment System (OWTS) Report for Land Divisions is required for all proposed Tract and Parcel Maps (all Planning schedules) that will utilize an OWTS for sewage disposal. The OWTS Reports for Land Divisions will only be accepted by the Department if they are prepared by certain professionals. Only the grading engineer, who has expertise in designing onsite wastewater systems or the Professional of Record (PR) who performed the actual Percolation Test (Perc Test) can prepare the OWTS Report. The PR that prepares the report must possess at least one of the following current and valid California registrations:

- Professional Engineer (PE)
- Professional Geologist (PG)
- Registered Environmental Health Specialist (REHS)

The Report shall include, but not be limited to the following:

1. Location of the land, legal description and the Riverside County Assessor's Parcel Number (APN).
2. Client's name, address and phone number.
3. Type of proposed development and number of lots.
4. Type of OWTS, i.e. conventional gravity, pumped, leach lines, seepage pits, etc.
5. Detailed description of the property including the following items:
    a) Describe the corner stake locations in relation to other natural or manmade landmarks on the property. Note: Riverside County Subdivision Ordinance 460, Section 4.2 states: "Prior to filing a Tentative Map, the land developer shall place a conspicuous stake identified with a number or corner description and flag (brightly colored tape or ribbon) at each approximate corner of the property proposed to be subdivided."
    b) The PR shall be able to accurately locate the property to be tested and the corner stakes shall be in place as noted above before any work is performed on site. A durable sign, with the owner's or engineer's name along with the legal description of the property must be placed in a conspicuous spot visible from the street or street easement.
    c) A general description of surface features which may interfere with the placement or operation of the OWTS.
6. Contour Map
   Tentative Subdivision and Parcel Maps shall have maximum contour intervals as follows:

Slope	**Interval**
0-9%	5 foot maximum
10% or greater	10 foot maximum

   Note: Copies of United States Geological Survey Maps are not acceptable for this purpose.

7. Site Plan - Each lot site plan on the tentative map shall include the following features:

    a) All intermittent or perennial, natural or artificial bodies of water or watercourses.
    b) All large trees and significant vegetation.
    c) All existing structures.
    d) All existing wells on or within 200 feet of the map boundaries.
    e) Proposed or existing domestic water service lines or water mains.
    f) All rock outcroppings.
    g) Indicate where all tests and borings were performed and the identifying markings on the corresponding field laths.
    h) All tests and borings must be accurately dimensioned to the property lines.

8. Grading Plan
   If grading plans are required, the plans must be designed by a Registered California Civil Engineer and meet the requirements of the Riverside County Department of Building and Safety.

   If grading is contemplated, the PR noted above shall assume theoretical cuts and fills and perform the tests and borings at the necessary depths. If the final grading exceeds the testing PR's estimate by more than plus or minus 2 feet, an additional test may be required.

   The grading plans shall include any proposed cuts and/or fills in the area of the proposed OWTS as well as indicate the proposed locations of both the primary and expansion area for the OWTS.

9. Perc Test
   A minimum of one perc test and one boring shall be performed on each lot within the proposed land division. The tests must be conducted in the area where the systems will be placed based on preliminary information at the time of the testing.

   Prior to the commencement of the perc test, the PR shall give notification of the time and place of the test to the Department at least two business days in advance. The Department will issue a confirmation number to the PR which will serve as proof of this notification. This confirmation number must be incorporated into the soils percolation report on the cover sheet published by the PR. If the Department is not present at the prescribed time that the test is to be conducted, the PR may proceed without the Department representative being present. The testing, however, must be conducted in conformance with these regulations. Refer to Chapter 3 for perc test procedure details and requirements.

10. Minimum Lot Size Requirements

The Department has a minimum lot size requirement for lots proposed to be created and developed based on the use of an OWTS. The minimum lot size for any subdivision of property made pursuant to the Subdivision Map Act proposing to use OWTS shall not be less than 0.5 acre, or less than 2.5 acres if also proposing individual domestic wells. In proposed subdivisions where high ground water, steep slopes, or poor soil conditions exist, or where there are significant impacts to ground water quality, any or all of the following may be required: an increase in lot size, supplemental treatment, or other mitigating measures as determined by the Department. Where zoning regulations require greater lot sizes, those regulations shall take precedent.

Lots created prior to the implementation of this LAMP are not subject to the aforementioned minimum lot size requirements, however they will be subject to the design requirements of this LAMP. Existing and approved tentative tract maps are also not subject to the aforementioned minimum lot size requirements, if they have received an approved San 53 (see Chapter 7) from DEH ***AND*** have submitted a planning application prior to the effective date of the LAMP.

Proposed subdivisions with more than 40 lots where the lot sizes are less than 2.5 acres per lot shall provide for the extension or development of full public sewerage services to be permitted by the Regional Water Quality Control Board.

Note: Areas of special concern will have additional requirements as specified in Chapter 13.

11. Preliminary Recommendations

Preliminary recommendations for each lot shall include, but not be limited to, the following:

a) Design rate in minutes/inch converted to square feet/100 gallons of septic tank capacity for leach lines, and/or in gallons per square foot converted to vertical feet of seepage pit per 100 gallons of septic tank capacity (specify 5 or 6 foot diameter) for both the primary and expansion systems.
b) Location of the systems.
   Note: If possible, the septic tank should be located in the front yard. This helps to accommodate servicing and facilitates an eventual connection to sewer if it becomes available.
c) Depth of systems. Recommendations should correspond to depth of tests. Maximum depth of leach line or pit should be stated. Effective sidewall of seepage pit must correspond to testing depths.
d) Special designs, if necessary. Examples include additional separation of pits or lines, amount of rock below line in excess of required code, chamber type line, non-conventional pumped, advanced treatment, etc.
e) A statement as to whether or not there will be sufficient usable space available on every lot - in addition to the areas set aside for the primary and expansion

systems - for the installation of swimming pools or other large structures.

12. The following declarations shall be incorporated into the conclusion section of the OWTS report:
    a) "Based on the data presented in this report and using the recommendations set forth, it is the judgment of this professional that there is sufficient area on each lot to support a primary and expansion OWTS that will meet the current standards of the Department of Environmental Health and the OWTS Policy."
    b) "The designed system shall be located in natural undisturbed soil at the depth of the tests performed."
    c) "The natural occurring body of minerals and organic matter at the proposed wastewater disposal area contains earthen materials having more than 50% of its volume composed of particles smaller than 0.08 inches (2 mm) in size."
    d) "Based on the data presented in this report and the testing information accumulated, it is the judgment of this professional that the groundwater table will not encroach within the current allowable limits set forth in Chapter 11 of this LAMP."

        Note: When no groundwater is detected in the 15 foot boring, this statement can be made with a reasonable amount of certainty. However, when groundwater is present in the borehole it then becomes necessary to demonstrate with additional facts and findings, why this water level won't fluctuate to the point of encroachment. Failure to explore the possibility that detected groundwater could interfere with the OWTS, or violate the Regional Water Board's Basin Plan would not be in keeping with good engineering practices.

Disclaimer:
County approval of a tract or parcel map, even after a preliminary review by the Department, is no guarantee that an OWTS permit can be issued for an individual lot. Suitability for OWTS use on a lot can only be determined by a full OWTS Report investigation of that lot.

CHAPTER 2 – ONSITE WASTEWATER TREATMENT SYSTEM REPORT FOR SINGLE LOTS

An Onsite Wastewater Treatment System (OWTS) Report is required for design of an OWTS for all single lot developments where sanitary sewer is not available. Construction permits for a second single-family dwelling unit on the same parcel must comply with a minimum lot size requirement of 0.5 acre per dwelling unit.

The OWTS Reports for single lots will only be accepted by the Department if they are prepared by certain professionals. Only the grading engineer, who has expertise in designing onsite wastewater systems or the Professional of Record (PR) who performed the actual Percolation Test (Perc Test) can prepare the OWTS Report. The PR that prepares the report must possess at least one of the following current and valid California registrations:

- Professional Engineer (PE)
- Professional Geologist (PG)
- Registered Environmental Health Specialist (REHS)

The Report shall include, but not be limited to the following:

1. Location of the land, legal description and the Riverside County Assessor's Parcel Number (APN).
2. Client's name, address and phone number.
3. Type of proposed development and number of lots.
4. Types of OWTS, i.e. conventional gravity, pumped, leach lines, seepage pits, etc.
5. Detailed description of the property including the following items:
    a) Describe the corner stake locations in relation to other natural or manmade landmarks on the property.
    b) The PR shall be able to accurately locate the property to be tested and the corner stakes shall be in place as noted above before any work is performed on site. A durable sign, with the owner's or engineer's name along with the legal description of the property must be placed in a conspicuous spot visible from the street or street easement.
    c) A general description of surface features which may interfere with the placement or operation of the OWTS.
6. Contour Map
   Map shall have maximum contour intervals as follows:

Slope	**Interval**
0-9%	5 foot maximum
10% or greater	10 foot maximum

   Note: Copies of United States Geological Survey Maps are not acceptable for this purpose.
7. Site Plan
    a) Each single lot shall have a site plan.
    b) The site plan shall be drawn to an engineering scale. (Typically 1"=20'or 1"=40').

c) The site plan will overlay the contoured map and include the following features.
    i. All intermittent or perennial, natural, or artificial bodies of water or watercourses.
    ii. All large trees and significant vegetation.
    iii. All existing structures on the lot.
    iv. All proposed structures including driveways, patios, pools, sidewalks etc. (number of bedrooms for homes).
    v. All existing wells on or within 200 feet of the property boundaries.
    vi. Proposed domestic water service lines, and proposed or existing water mains.
    vii. All rock outcroppings.
    viii. Indicate where all tests and borings were performed on the property.
    ix. All tests and borings must be accurately dimensioned to the property lines.
    x. Ornamental ponds.
    xi. All known recorded easements on or within 20 feet of lot boundaries (open space, utilities, etc.), or any other environmental constraints assigned to the proposed map.
    xii. A cross section that clearly calls out the elevations between the primary systems components.
    xiii. The elevation of the individual building pads in reference to the elevation of the sewage system (i.e., tank inlet, D-Box inlet, and leach line or seepage pit inlet).
    xiv. Purpose of project (e.g., new dwelling, new structure, guesthouse, addition, etc.).

8. Grading Plan

If grading is contemplated, the PR must assume theoretical cuts and fills and perform the tests and borings at the necessary depths. If the final grading exceeds the testing PR's estimate by more than plus or minus 2 feet, an additional test may be required.

The following information shall be shown on all grading plans:

a) The anticipated cuts and/or fills in the area of the proposed OWTS.
b) Both primary and expansion OWTS.
c) The elevation of the individual building pads in reference to the elevation of the sewage system (i.e. tank inlet, D-Box inlet, leach line, or seepage pit inlet).
d) When the grading plan is prepared by other than the person preparing the OWTS Report, the PR for the OWTS Report must use the finished grading contours as a basis for his site plan (i.e., the site plan must incorporate the finish contours).

9. Perc Test

Leach fields require a minimum of four perc tests and one deep boring. Seepage pits require a minimum of two perc tests and one deep boring.

The tests must be conducted on the lot in the area where the system will be proposed. Prior to the commencement of the percolation tests, the PR shall notify the Department

of the time and place of the test at least two business days in advance. The Department will issue a confirmation number to the PR which will serve as proof of this notification. This confirmation number must be incorporated into the soils percolation report on the cover sheet published by the PR. If the Department is not present at the prescribed time that the test is to be conducted, the PR may proceed without the Department representative being present. The testing, however, must be conducted in conformance with these regulations. Refer to Chapter 3 for Perc Test procedure details and requirement.

Note: A perc test may not be required in sandy soil areas (rates faster than 10 minutes per inch) and where there is a known 40 foot separation to groundwater.

10. Design recommendations including but not limited to the following:
    a) Design rate in minutes/inch converted to square feet/100 gallons of septic tank capacity for leach lines, and/or in gallons per square foot converted to vertical feet of pit per 100 gallons of septic tank capacity (specify 5 or 6 foot diameter) for seepage pits, for both the primary and expansion systems.
    b) The location of the systems.
       Note: If possible, the septic tank should be located in the front yard. This helps to accommodate servicing and facilitates an eventual connection to sewer if it becomes available.
    c) Depth of systems. Recommendations should correspond to depth of tests. Maximum depth of leach line or pit should be stated. Effective sidewall of seepage pit must correspond to testing depths.
    d) Special design, if necessary. For example, additional separation of pits or lines, amount of rock below line in excess of required code, chamber type line, non-conventional pumped, advanced treatment, etc.
    e) Conclusions. The following declarations shall be included in the conclusion section of the OWTS Report:
        i. "Based on the data presented in this report and using the recommendations set forth, it is the judgment of this professional that there is sufficient area on each lot to support a primary and expansion OWTS that will meet the current standards of the Department of Environmental Health and the Regional Water Board."
        ii. "The designed system shall be located in natural undisturbed soil at the depth of the tests performed."
        iii. "The natural occurring body of minerals and organic matter at the proposed wastewater disposal area contains earthen materials having more that 50% of its volume composed of particles smaller than 0.08 inches (2 mm) in size."
        iv. "Based on the data presented in this report and the testing information accumulated, it is the judgment of this professional that the groundwater table will not encroach within the current allowable limits set forth in Chapter 11 of this LAMP."
            Note: When no groundwater is detected in the 15 foot boring, this

statement can be made with a reasonable amount of certainty. However when groundwater is present in the borehole it then becomes necessary to demonstrate with additional facts and findings, why this water level won't fluctuate to the point of encroachment. Failure to explore the possibility that detected groundwater could interfere with the OWTS, or violate the Regional Water Board's Basin Plan would not be in keeping with good engineering practices.

CHAPTER 3 – PERCOLATION TESTING PROCEDURES

Percolation testing shall be conducted only by individuals trained and educated to perform, understand and evaluate the field conditions and tests as they relate to OWTS. This would include those with experience in OWTS design and holding one of the following State of California credentials and registrations: PE, PG or REHS. The Department will only approve the percolation test (perc test) method described in this Chapter.

Prior to the commencement of the perc test, the Professional of Record (PR) shall give notification of the time and place of the test to the Department at least two business days in advance so that Department staff can observe the testing. The Department will issue a confirmation number to the PR which will serve as proof of this notification. This confirmation number must be incorporated into the soils percolation report on the cover sheet published by the PR. If the Department is not present at the prescribed time that the test is to be conducted, the PR may proceed without the Department representative being present. The testing however must be conducted in conformance with these regulations.

When the perc test has been completed, a 3 foot long surveyor's stake shall be flagged with highly visible banner tape and placed in the location of the test indicating date, test number as shown on the field data sheet, and firm performing the test.

Information to be Included in the Percolation Report

1. Date of testing.
2. Type of equipment used to construct the boreholes, such as backhoe, hollow stem auger, etc.
3. Delineation of any special calculations such as gravel correction factor (if used).
4. Test results shall be provided in tabular format showing the following: Test number, rate in minutes/inch and square feet per 100 gallons of septic tank capacity for leach lines and/or rate in gallons per square foot per day for seepage pits., depth of test and soils classification. Refer to Appendix I for sample test forms.
5. Field perc test data including date, time of day, presoak description, and location of hole with respect to property lines or other landmarks.
6. Results of exploratory trench or deep boring.
7. Statement of sewer availability.

Standard Perc Test Procedures for Leach Lines

1. Test hole opening shall be between 8 and 12 inches in diameter or between 7 and 11 inches on side if square.
2. The depth of the hole shall correspond to the depth of the proposed leach line trench.
3. The bottom of the test hole shall be covered with 2 inches of gravel.
4. To pre-soak, invert a full 5 gallon bottle of clear water supported over the hole so that the water flow into the hole holds constant at least 8 inches above the gravel at the bottom of the hole. Testing shall commence after all of the water has percolated through the test hole or after 15 hours has elapsed since initiating the pre-soak.

5. The sides of the hole shall remain undisturbed (not smeared) after drilling and any cobbles encountered left in place.

Additional Testing for Critical Areas for Leach Line Design

Deep perc test procedures shall be used where an impermeable strata has been encountered. The PR shall demonstrate that an impermeable strata (i.e. bedrock, etc.) condition does not exist within a distance of 8 feet below the proposed leach line trench bottom. These standards allow the PR to demonstrate conformance with this criterion by testing to ensure that the impermeability at this depth does not exceed 120 minutes per inch.

In critical areas, the PR shall perform two additional percolation tests at a depth of 8 feet below the trench bottom. In preparation for the testing, 10 gallons of water must be used to presoak each of these two test borings. The pre-soak period is not to extend beyond 48 hours and testing must commence as soon as practicable after all water has drained, or at the most 48 hours. For these deep perc tests, measurements shall be taken at 30 minute intervals over a 6 hour period. The location of the test borings must be in the area on the site where the system will ultimately be placed.

If partially decomposed, or unaltered rock or shale materials are encountered in the site trench, the PR will evaluate any fissuring (extent and orientation), and make a conclusive statement addressing the ability of the underlying materials to accept and effectively convey the hydraulic loading from the system and the seasonal average rainfall.

Perc Test Measurements for Leach Line Design

In sandy soils when two consecutive measurements show that 6 inches of water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements taken every ten minutes. The drop that occurs during the final ten minutes should be used to calculate the percolation rate. Field data must include the 2 – 25 minute readings and the 6 – 10 minute readings.

In non-sandy soils, if all of the water has percolated either while the tester is present or after 15 hours, remove the bottle and add water until the level is 6 inches above the gravel at the bottom of the test hole. Obtain a minimum of six measurements per hole within 6 hours with a precision of at least 0.25 inches. Refill to 6 inches over the top of the gravel after each measurement. Intervals between readings shall be not less than 30 minutes. The drop that occurs during the final reading should be used to calculate the percolation rate. To assure saturated conditions, if no water remains in the hole after the initial soaking, testing must start no later than 26 hours after that soaking.

The field results are to be reported in minutes per inch (minutes/inch). This then corresponds to the leach line trench bottom area in square feet for every 100 gallons of septic tank capacity. The conversion is provided in Table 3.1.

TABLE 3.1

Minutes / Inch	Minimum Sq. Ft. per 100 Gallons	Minutes / Inch	Minimum Sq. Ft. per 100 Gallons
0-9	20	26-27	60
10-11	25	28-30	65
12-13	30	31-32	70
14-16	35	33-37	80
17-18	40	38-43	90
19-20	45	44-48	100
21-23	50	50-54	110
24-25	55	55-60	120

Maximum rate allowed is 60 minutes per inch.

Perc Test Procedures for Seepage Pit Design

1. Borehole diameter shall be either 6 inch or 8 inch only. No other diameter test holes will be accepted.
2. The test depth shall be at the intended depth of the seepage pit. No pits will be allowed shallower than 10 ft. below inlet or deeper than 40 ft. below ground surface.
3. Fill the hole with clear water to a maximum depth of 4 feet below the surface of the ground or if grading cuts are anticipated, to the depth of the assumed inlet of the proposed seepage pit.

Perc Test Measurements for Seepage Pit Design

1. All holes shall be pre-soaked for 24 hours unless the site consists of sandy soils containing little or no clay. If sandy soils exist and the water on two consecutive readings seeps away faster than half the wetted depth in 25 minutes or less, the tests may then be run after a 2 hour pre-soak.
2. Except in sandy soils, the percolation rate measurement shall be made on the day following the pre-soak procedure. Adjust water to the proposed inlet depth. From a fixed reference point, measure the drop in water level over a 30 minute period for at least 6 hours, refilling after every 30 minute reading. The total depth of hole must be measured at every reading to verify that collapse of the borehole has not occurred.
3. In sandy soils, the time interval between measurements shall be 10 minutes and the test run for 1 hour. This does not include the two consecutive fillings that are part of the pre-soak.

The seepage pit percolation rate shall be calculated in the following manner:

$$Q = \frac{(F/T) \times (Dx9)}{L\ (Avg.)} \qquad \text{Or} \qquad Q = \frac{(R)(D)(9)}{L\ (Avg.)}$$

Where R=F/T in Ft/Hr.

a) Q = Rate in gallons/sq. ft. of sidewall per day of septic tank effluent.
b) F = Drop during time interval in feet.
c) T = Time interval in hours.
d) D = Diameter of hole in feet.
e) L (Avg.) = Average wetted depth during time interval in feet. Minimum depth is 10 feet.

   The seepage pit depths (below the inlet) for 5 ft. and 6 ft. diameter pits are derived from the rate (Q) in the following manner:

   i. Total depth required for a 5 ft. diameter pit below the inlet = Septic Tank Capacity. /Q x 15.7 (where 15.7 is the circumstance in feet of a 5 foot diameter pit).
   ii. Total depth required for a 6 ft. diameter pit below the inlet = Septic Tank Capacity. /Q x 18.8 (where 18.8 is the circumstance in feet of a 6 foot diameter pit).
   iii. The recommended effective sidewall of the seepage pit must correspond to the testing depths.
   iv. Rate allowed is $1.1 < Q < 4.0$.

Refer to the Appendices for example field test forms for seepage pits.

Exploratory Trench or Deep Borings

This procedure is used in addition to the standard perc test. An exploratory trench or boring is an excavation or hole drilled in the area of the proposed OWTS. It will be used to provide additional information including: type of soil, soil moisture, depth of the water table, perched or otherwise, rock or impervious soil.

The excavation or boring must extend to a minimum depth of 10 feet below the bottom of the proposed system to determine if the depths of the water table, bedrock, or impervious soils (percolation rate of greater than 120 minutes per inch), and whether they encroach within the allowable limits. However, the minimum depth of any boring is 15 feet below ground surface, or stated refusal. The PR must address all refusals encountered. If water is found, refer to Chapter 4 for additional testing requirements.

For the Department to verify absence of or presence of ground water within the 15 foot boring or excavation, a 4 inch perforated PVC pipe shall be left in place. The excavation or boring with the pipe installed can be back filled. The pipe should be secured to prevent damage or vandalism.

CHAPTER 4 – SPECIAL TESTING FOR HIGH GROUNDWATER OR PERCHED WATER AREAS

The presence of high groundwater can negatively impact the operation of an OWTS. The elevated groundwater can cause the system to fail and significantly degrade the surrounding groundwater quality that other utilities use as a source of drinking water. In order to determine if groundwater has impacted the site, special testing may be required when groundwater is encountered within 12 feet of ground surface and less than 80 percent of the annual seasonal rainfall has occurred. The special testing is also required where high ground water would be anticipated, such as in the following areas: near drainage courses, streams, bodies of standing water, and areas of shallow bedrock that allow rapid fluctuating perched water due to water entrapments and poor permeability. The special testing will be used to confirm if groundwater has indeed impacted the site and could preclude the use of a conventional OWTS.

Special Testing Procedures:
An excavation is to be dug with a backhoe or bucket rig capable of allowing access for visual inspection by a qualified individual experienced at evaluating the soil strata for visual signs of mottling and other geological signs to determine historic high ground water levels. The Professional of Record (PR) shall give the Department notice of when the excavation will be open for observation. The presence of mottled soil is marked with spots, blotches or contrasting color which is usually caused by saturation for some period during a normal year, unless it has been artificially drained. (If the site has been artificially drained, contact this Department for further evaluation.) This method has been used for many years as a reliable indicator of groundwater encroachment. Refer to the end of this chapter for a description of the cause of soil mottling development.

Mottling can be described in terms of abundance, size and contrast which are delineated below:

Abundance: Few – Occupy less than 2% of the exposed surface.
Common – Occupy from 2 – 20% of the exposed surface.
Many – Occupy more than 20% of the exposed surface.

Size: Fine – Less than 1/5 inch in diameter along the greatest dimension.
Medium – From 1/5 to 3/5 inch diameter along the greatest dimension.
Coarse – Greater than 3/5 inch diameter along the greatest dimension.

Contrast: Faint – Evident but recognizable only with close examination.
Distinct – Not striking but readily seen.
Prominent – Obvious and one of the outstanding features of the horizon.

If soil mottling is found, a conventional system typically cannot be used at this site. Contact your PR to determine the best course of action.

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Special Section

Mottled Soil Development

With ambient temperatures above 40°F, two basic types of bacteria are the agents which decompose or oxidize organic matter in the soil. Aerobic bacteria are the primary agents as long as there is some air present in the soil. As infiltrating water and/or a rise in groundwater fills the air spaces (voids) saturating the soil, air is excluded and anaerobic bacteria become the primary decomposers. They utilize insoluble manganese and iron compounds that are present in the soil instead of air. Chemical reactions occur causing manganese and iron ions to be liberated from the otherwise insoluble oxide and hydroxide compounds and begin to flow through the soil solutions. Since this action drains iron ions, a color reduction occurs in those areas tending to turn them gray or white. When these ions again encounter oxygen in aerated pores, they immediately recombine with air to form yellow, orange and rust colored concentrations. Manganese ions are re-oxidized and form black concentrations. If this process has prevailed for significant periods over recent geologic past, the resulting mottled soil colors can be quite readily observed. Hence, this historic recording of saturation in the soil can be used to estimate the groundwater level expected to occur during a near normal spring season. Experience has shown that this level can be predicted quite accurately at most sites.

CHAPTER 5 – DESIGN REQUIREMENTS FOR CONVENTIONAL ONSITE WASTEWATER TREATMENT SYSTEMS (OWTS)

No person shall erect, construct, rebuild, convert or alter any plumbing system designed for the discharge or disposal of sewage or sewage effluent unless written approval for such purpose is obtained from the Department.

Basic Requirements of OWTS Design

1. There shall be a minimum of 5 feet of undisturbed soil between groundwater and the leach lines. A minimum of 10 feet of soil shall be between groundwater and the bottom of a seepage pit.
2. No conventional OWTS shall be allowed in an area where the separation to groundwater is less than 5 feet from the bottom of the leach line trench. Shallow groundwater levels can be determined as described in Chapter 4 and/or seasonal rainfall per Ord. 650.
3. There shall be a minimum of 8 feet of soil between the bottom of the system and impermeable strata. Impermeable strata shall be defined as any soil strata, fractured rock or bedrock, weathered or non-weathered, that has a percolation rate in excess of 120 minutes per inch.
4. The soil in the area of the OWTS shall not have a percolation rate slower than 60 minutes per inch for leach lines or 1.1 gallons per square foot of sidewall/day for seepage pits.
5. If the percolation rates are faster than 5 minutes per inch for leach lines or 10 gallons per sq. foot per day for seepage pits, the soil depths required in Section 1 above must contain at least 10% fines smaller than 0.08 millimeters (fit through a #200 sieve). A minimum of a 40 foot separation between the bottom of the OWTS and the high groundwater table must be maintained if the fines percentage requirement is not met. This assumes that at some depth above high groundwater there exists 5 feet (for leach lines) or 10 feet (for seepage pits) of soil that has enough fines (#200 sieve) to meet the above requirement.
6. Where soils consist of greater than 10% rock fragments (cobbles, stones and gravel), the dispersal system area shall be increased in proportion to the percent of rock fragments to compensate for the lost treatment volume.
7. All OWTS shall be designed so that additional dispersal areas equivalent to at least 100% of the required original system be provided on the plot plan. This is called the expansion area.
8. Dispersal systems, except for seepage pits, shall not exceed a maximum depth of 10 feet as measured from the ground surface to the bottom of the trench.
9. Where liquid waste contains fats, oils, and/or grease that affect the OWTS, a grease interceptor for such waste shall be installed and sized according to the current edition of the Uniform Plumbing Code (UPC).

Septic Tank Design

All septic tanks shall be in conformance with the current edition of the UPC. The tank shall be equipped with at least two risers: one at the solids side and the other on the effluent side. For

septic tanks which are 2,000 gallons or larger, the solids side shall be equipped with at least two risers. All risers shall extend to within 4 inches of final grade with access openings of at least 20 inches in diameter, watertight and secured to prevent unauthorized access.

Tanks shall also be equipped with effluent filters 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 National Sanitation Foundation (NSF)/American National Standards Institute (ANSI) Standard 46 certified septic tank filter at the final point of effluent discharge from the OWTS and prior to the dispersal system shall be deemed to meet this requirement.

The liquid capacity of the septic tank shall conform to UPC Tables H2.1 or H2.1(1) as determined by the number of bedrooms or apartment units in dwelling occupancies, and the estimated waste/sewage design flow rate or the number of plumbing fixture units as determined from UPC Table 702.1 , whichever is greater in other building occupancies.

Guidelines for Determining the Number of Bedrooms

1. Once the living room, dining room, family room, kitchen, bathrooms, and utility rooms have been established, all other rooms shall be considered as potential sleeping rooms. Dens, libraries, studies, weight rooms, sewing rooms, workshops, etc., shall be determined as bedrooms.
2. All other habitable rooms totaling at least seventy (70) square feet in size are to be considered bedrooms suitable for sleeping purposes, regardless of whether or not they contain closets or have access to a bathroom.
3. Rooms that open to a living room, dining room, family room, kitchen, or entry way, and have a single, un-obstructive opening (no doors) with a minimum 50% opening of the total wall space (minimum 6’ wide) with archways or other acceptable means shall not be considered as bedrooms.
4. Rooms that can only be accessed through another bedroom are to be considered part of that bedroom, such as master suite and not an additional bedroom.
5. In the case of an ambiguous situation, where it is not clear as to whether or not a room is a bedroom, the plans may be reviewed on a case-by-case basis by the Department.
6. Any cases, which will require the relocation or modification of doorways, are to be reviewed and approved by Building and Safety to address any structural considerations such as load bearing walls. This is to be done prior to approval or sign-off by the Department.

Note: Septic tank size using the estimated waste/sewage flow rates should be calculated as follows:

1. Waste/sewage flow up to 1,500 gallons/day (5,677.5 L/day)
   Septic tank size = Waste/sewage flow x 1.5
2. Waste/sewage flows over 1,500 gallons/day (5,677.5 L/day)
   Septic tank size = Waste flow x 0.75 + 1,125

Absorption System General Design

The required square feet of leaching area for either a seepage or leach system shall be based on the calculated septic tank capacity. For every gallon of septic tank capacity required, there is an equivalent square foot of leaching area required based on the soil rate. The maximum septic tank size and its absorption system are limited by the following table:

Table 5.1

Leach Lines: Sq. Ft./ 100 gallons	Seepage Pits: Q=Gallons/Square Foot/Day	Maximum Septic Tank Size Allowable (Gallons)
25	4	7500
40	3.2	5000
90	2.5	3500
120	1.11	3000

Leaching Beds

Where leaching beds are proposed, the area of the bed shall be at least 50% greater than the requirements for trenches. Distribution drain lines in leaching beds shall not be more than 6 feet apart on centers, and no part of the perimeter of the leaching bed shall be more than 3 feet from a distribution drain line. When "chamber" type units are proposed, the Department will allow a 20% reduction when calculating the required leach bed bottom area.

Leach or Drain Line Design

The leach line disposal field shall be constructed as follows:

Table 5.2

1. Minimum number of drain lines per field	1
2. Maximum length of each line	100 feet
3. Bottom width of trench	36 inches
4. Minimum spacing of lines center to center	7 feet
5. Minimum depth of earth cover over lines	12 inches
6. Preferred depth of cover of lines	18 inches
7. Minimum filter material over drain lines	2 inches
8. Perforated pipe or "chamber" shall be laid level and with the end of the line capped	
9. Each leach line trench must be separated by sufficient natural and undisturbed soil	

Sidewall Calculations for Leach Line and Leach Bed Design

This Department will allow the use of side wall calculations for leach line design with the following stipulations:

1. Percolation tests must be performed at the proposed bottom of the trench.
2. Boring depth must be extended proportionately to allow for increased leach line depth.
3. The effective application area shall increase by 2 square feet of bottom area for each additional foot of rock in excess of the required 1 foot of rock below the bottom of

the drain line. Total depth of rock shall not exceed 3 feet.

4. The horizontal separation distance between any two adjacent leach lines must be increased by 1 foot (greater than the existing 7 foot center to center requirement) for each additional foot of rock greater than the minimum 1 foot.
5. No system shall have a total trench bottom area less than 150 sq. ft.

Table 5.3 lists the allowance for sidewall calculations:

Table 5.3
Sidewall Calculation Allowances

Depth of Rock Below Leach Line	Square Foot of Bottom Area per Linear Foot of 3 Foot Wide Trench
1 foot of rock	3 Sq. Feet
2 foot of rock	5 Sq. Feet
3 foot of rock	7 Sq. Feet

Leach Line Installation on or Near Slopes

Any portion of the disposal field shall maintain a 15 foot horizontal distance from daylight (or side of slope) to any portion of the leach line or leach bed. Table 5.4 gives the minimum cover allowed and depth of testing versus the percent of slope in the area of the disposal field to meet the 15 foot requirement. This table also gives a factor by which to increase the square foot of bottom area due to the loss in transpiration caused by the added cover overburden.

Note: No system shall be installed in slopes greater than 30% without a slope stability report approved by a registered professional.

Note: The minimum depth of test required due to percent (%) slope of natural ground does not take into account leach line designs utilizing 2 feet or 3 feet of rock underneath leach line pipe. The Professional of Record must increase the required test depth to accommodate for the use of 2 feet or 3 feet of rock.

Table 5.4
Leach Line Overburden Factor

Slope of natural ground in area of disposal system (%)	Minimum cover over lines / bed (ft.)	Minimum depth of test required (ft.)	Overburden Factor
5%	1	3	1.0
10%	1.5	3	1.0
15%	2.25	4	1.0
20%	3	4	1.0
25%	3.75	5	1.1
30%	4.5	6	1.2
35%	5.25	7	1.3
40%	6	8	1.4
45%	7.0	9	1.5

Serial Distribution (Step Dam System)

On steep slopes, leach lines or leach beds shall be stepped to prevent excessive line slope. 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 passes to the next lower leach line or bed. The lines between each horizontal leaching section may be installed on natural or unfilled ground. Step dam systems are generally required on slopes greater than 20%. See Figures 5.1 - 5.3.

Figure 5.1

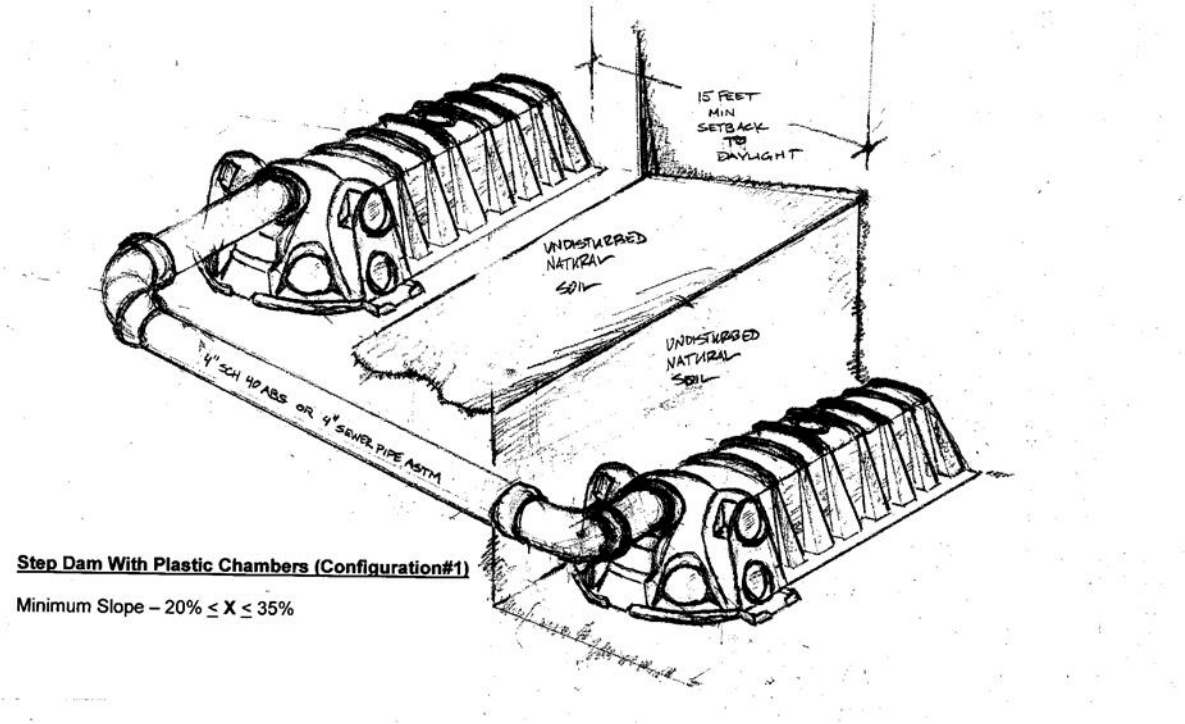
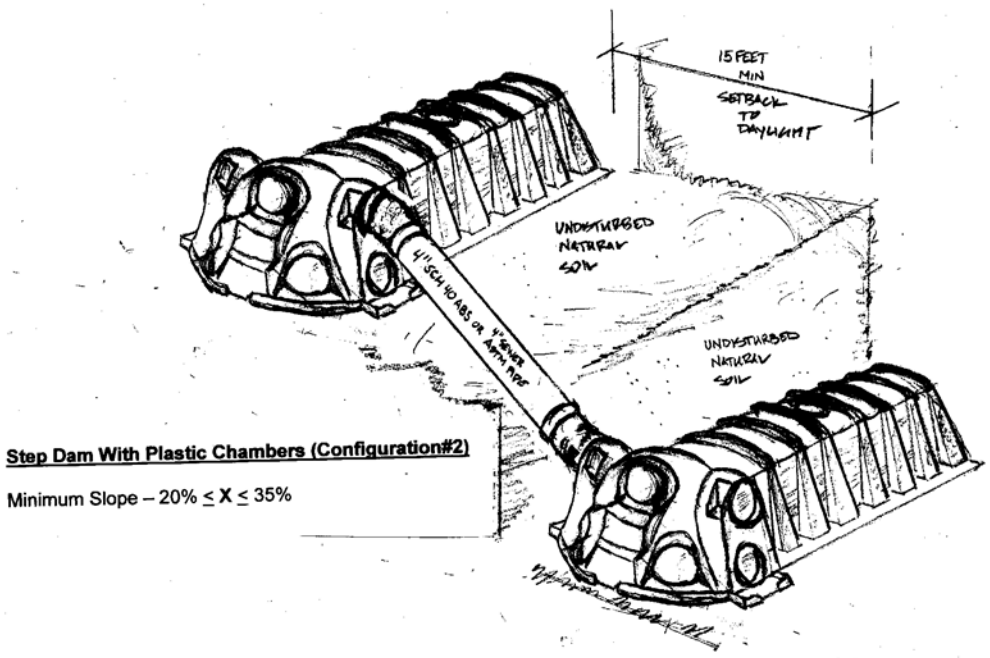


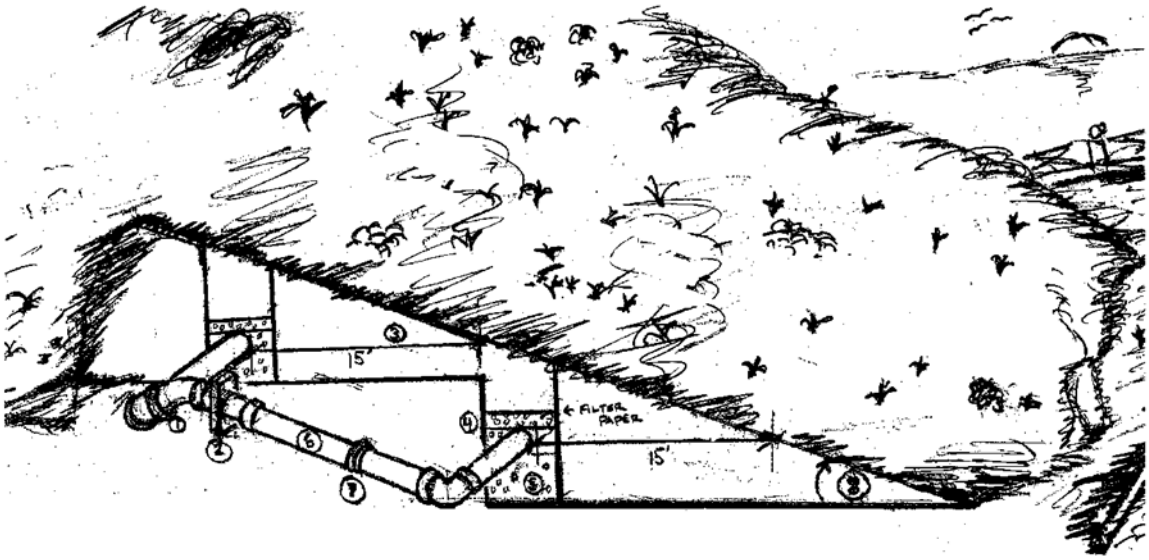
Figure 5.2



Step Dam With Plastic Chambers (Configuration#2)

Minimum Slope – 20% ≤ **X** ≤ 35%

Figure 5.3



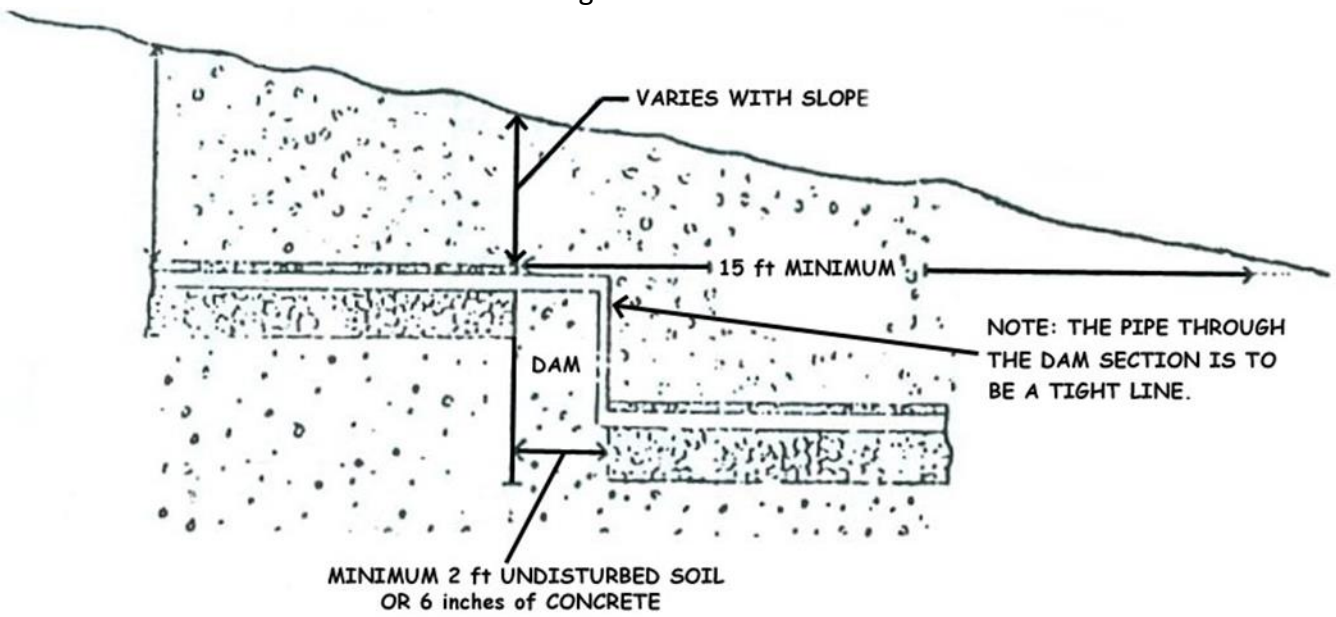
Conventional Step Dam Configuration

1) Elbow
2) Concrete Dam
3) 15 feet minimum horizontal setback to daylight
4) 4" minimum rock in-between leach line pipe and filter paper
5) 12" minimum rock underneath leach line pipe
6) 4" diameter solid pipe (schedule 40 abs or 4" astm standard sewer pipe)
7) Tight Joint
8) Minimum Slope – 20% ≤ **X** ≤ 35%

Slope Leach Line Installation – With the Slope

On moderate slopes where the system is installed with the slope, dams (natural or man-made) must be provided at each step down as shown in Figure 5.4.

Figure 5.4



Driveways

Leach lines shall not be installed under driveways, paved or unpaved. Seepage pits may be installed beneath driveways provided they are fitted with traffic rated lids.

Seepage Pit Design

Seepage pits shall be constructed as follows:

1. Each seepage pit shall be circular in shape and shall have an excavated diameter of not less than five feet.
2. Each pit shall be lined with precast concrete circular sections.
3. Each seepage pit shall have a minimum sidewall of 10 feet below the inlet with a maximum total depth of 40 feet below ground surface, unless approved by the Department.
4. The lid of the seepage pit must be at least 18 inches but no more than 4 feet below the surface of the ground.
5. The horizontal distance from a seepage pit to the top of a cut bank shall be equal to 5 times the vertical height of the bank or 25 feet, whichever is less.
6. A minimum 6 inch annulus filled with clean ¾ inch gravel shall be provided between the pit structure and the excavation wall. Slag is acceptable if it is clean and uniformly sized at ¾ inch.

Setbacks

The OWTS must be setback from certain structures and features to help ensure public safety

and proper functioning of the system. Table 5.5 delineates setbacks from septic tanks, disposal fields and seepage pits. Watercourses require special consideration.

Table 5.5
Minimum Horizontal Separations for Subsurface Sewage Disposal

Minimum Horizontal Distance From:	**Septic Tank**	**Disposal Field**	**Seepage Pit**
Building or Structure[1]	5 feet	8 feet	8 feet
Property Line Adjoining Private Property	5 feet	5 feet	8 feet
Water Wells/Monitoring Wells[2]	100 feet	100 feet	150 feet
Public Water Wells	150 feet	150 feet	200 feet
Trees (greater than 10 inches in diameter)	10 feet	---	10 feet
Seepage Pits	5 feet	5 feet	12 feet
Disposal Field	5 feet	4 feet	5 feet
On Site Domestic Water Service Line[3]	5 feet	5 feet	5 feet
Distribution Box	---	5 feet	5 feet
Pressure Public Water Main Line	10 feet	10 feet	10 feet
Flood Plain / 100 Year Flood Zone	Refer to Current UPC	Refer to Current UPC	Refer to Current UPC

[1]Building or structure includes porches and steps, whether covered or uncovered, breezeways, roofed porte-cocheres, roofed patios, carports, covered walks, covered driveways and similar structures or appurtenances.
[2]All drainage piping shall clear domestic water supply wells by at least 50 feet. This distance may be reduced to not less than 25 feet when the drainage piping is constructed of materials approved for use within a building.
[3]Water pipes crossing sewer piping shall be laid a minimum of 12 inches above that sewer pipe.

<u>Public Water System Surface Water Intake Point</u>
Where the effluent dispersal system is within 1,200 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 400 feet from the high water mark of the reservoir, lake or flowing water body.
Where the effluent dispersal system is located more than 1,200 feet but less than 2,500 feet from a

public water systems' surface water intake point, within the catchment area of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 200 feet from the high water mark of the reservoir, lake or flowing water body.

Watercourses

Watercourses, for purposes of determining setbacks from OWTS, have been separated into four main categories which are defined as follows:

1. **OWTS Policy Tier 3.** This category includes properties within 600 feet of a Clean Water Act Section 303(d) impaired water body for nitrogen or pathogens. New or replacement OWTS for these properties must meet Tier 3 default requirements in Chapter 10 of the OWTS policy.

2. **Colorado River.** This category includes the main stem Colorado River and all adjacent watercourses, oxbows, marshes, etc. See Table 5.6.

Table 5.6
Setbacks from Colorado River

Septic tank	100 feet
Leach line	150 feet
Leach bed	150 feet
Seepage pit	600 feet

3. **Major Streams and Springs.** This category includes watercourses such as the Santa Ana River, Strawberry Creek, San Jacinto River, Murrieta Creek, etc. Major streams have surface flows year round during most years. See Table 5.7.

Table 5.7
Setbacks from Major Streams and Springs

Septic tank	100 feet
Leach line	100 feet
Leach bed	100 feet
Seepage pit	150 feet

4. **Ephemeral Streams.** These watercourses lose their surface flows at times during most years, but may still have significant underflows. Significant underflow is usually evidenced by lush vegetative growth at the streambed during the drier months of the year. See Table 5.8.

Table 5.8
Setbacks from Ephemeral Streams

Septic tank	25 feet
Leach line	50 feet
Leach bed	50 feet
Seepage pit	100 feet

5. **Drainage Courses**. These watercourses include: ephemeral streams with little or no underflow during dry periods, eroded channels, unlined drainage channels, swales, gullies, ravines, dry creek beds, etc. See Table 5.9.

Table 5.9
Setbacks from Drainage Courses

Septic tank	15 feet
Leach line	15 feet
Leach bed	15 feet
Seepage pit	15 feet

6. **Vernal Pools, Wetlands, Lakes, and Ponds.** OWTS components and dispersal systems shall be setback at least 200 feet from these water bodies unless advanced treatment or other mitigation measures are utilized.

All setback measurements for watercourses are to be taken from outer edge of the "high water mark" of the watercourse.

Notes: Not every watercourse will fit neatly into one of these categories. When there is some doubt as to how to properly categorize a watercourse, the setback requirement should be determined based on a joint field investigation by the Department and the Professional of Record.

CHAPTER 6 – ALTERNATIVE TREATMENT, GRAYWATER, AND HOLDING TANKS

Alternative Treatment Systems

Many lots that are desirable for development are unsuited for conventional septic systems as defined in Riverside County Ordinance 650 due to soil conditions and/or groundwater issues. Alternative Treatment Systems, also referred to as ATUs, are used to overcome specific site constraints generally having to do with high ground water or shallow soils, and provide the additional treatment that will not be provided in the soil.

As required by Ord. 650, all ATUs are subject to an annual renewable operating permit (ROP) issued by the Department and subject to inspections. A right of entry agreement and the requirement for maintaining an ROP shall be recorded on the property deed.

ATU Design Criteria

1. All supplemental treatment components of an ATU must be certified by the National Sanitation Foundation (NSF) to meet the minimum requirements of NSF Standard 40 and must meet the performance conditions established by this Department and the Regional Water Board. ATUs utilizing nitrogen reduction components shall achieve a minimum 50 percent nitrogen reduction, when comparing the 30-day average influent concentration to the 30-day average effluent concentration.
2. Percolation testing, soil depth evaluations and groundwater elevation determinations shall be performed by a Professional of Record (PR). Percolation testing will be performed at the proposed installation depth of the dispersal field and shall follow the procedures stated in Chapter 3 of this LAMP.
3. Treated effluent from all ATUs shall be discharged to a subsurface dispersal system consisting of leach lines, seepage pits, or pressurized drip dispersal systems.
4. System sizing for dispersal systems that utilize leach lines or seepage pits shall be the same as those used for conventional OWTS.
5. Pressurized drip dispersal systems shall be designed and installed per the manufacturer's recommendations.
6. A minimum 2 feet of soil must separate the bottom of the ATU dispersal system from impermeable strata or the highest anticipated level to which groundwater could be expected to rise.
7. The ATU shall be equipped with a visual and audible alarm that alert the owner/occupant of system malfunctions.
8. Site plans must include detailed specifications of the components of the proposed ATU.

Construction Requirements for Drip Dispersal Systems

The construction requirements for dispersal systems consisting of leach lines and seepage pit systems can be found in the specific chapters in this LAMP for those systems. The construction requirements for pressurized drip dispersal systems shall be as follows.

1. Drip dispersal systems must be installed by a Qualified Service Provider (QSP) trained on the specific system proposed, and installed according to the PR's specifications for location, components, size, and depth.

2. The natural soil cover over a drip dispersal system shall be at least 9 inches but no greater than 12 inches.
3. The area of the drip dispersal system shall be planted with appropriate vegetation to allow for uptake of nutrients from the wastewater.
4. The drip dispersal system shall be designed and maintained to reduce orifice clogging and root intrusion.
5. The drip dispersal system shall be designed, located and maintained to prevent vehicular traffic over it.
6. The setbacks required between drip dispersal systems and other components of the OWTS as well as structures, property lines, easements, watercourses, wells, or grading shall be the same as required for leach lines.
7. Drip dispersal systems are pressure distribution systems and head loss calculations shall be provided to ensure proper hydraulic pressure at the emitter.
8. Drip dispersal system emitter lines shall be designed as a continuous loop circuit with no dead-ends. Vacuum release valves shall be installed at the highpoint of the emitter lines.
9. The maximum emitter longitudinal spacing on an emitter line shall be 2 feet. The maximum spacing between adjacent emitter lines in an absorption bed configuration shall be 2 feet.
10. Drip dispersal systems shall be time dosed over a 24-hour period. Demand control dosing shall override timed dosing in periods of flow where timed dosing cannot accommodate the excessive flow.
11. All drip dispersal systems shall incorporate a mechanism for backwashing or flushing the drip lines and filters.
12. All components shall be certified in writing by the PR who designed the system that the installation was completed per the approved design.

Operation and Maintenance

1. All ATUs require an annual operating permit issued by this Department as required by Ordinance 650.
2. All ATU owners must maintain a service agreement with a QSP trained by the manufacturer.
3. All ATUs require, at a minimum, an annual inspection by the QSP to ensure proper operation and maintenance of the system. The QSP shall provide copies of the inspection results to this Department within 45 days of the date of inspection.
4. Failure to maintain an annual operating permit and/or provide the annual inspection report to this Department may result in enforcement action as specified in Ordinance 650.

Graywater Systems

Graywater is defined in the California Plumbing Code as untreated water that has not been contaminated with any toilet discharge. Graywater includes wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines, and laundry tubs, but does not include wastewater from kitchen sinks or dishwashers. No plumbing connection deemed by the

Department of having the potential of carrying toilet waste will be allowed to connect to a graywater system.

All graywater systems (Clothes Washer System, Simple System, Complex System) shall be designed pursuant to the most current edition of the California Plumbing Code and shall be designed for underground effluent dispersal only. No surface discharge of graywater is permitted. The capacity of an OWTS shall not be reduced or otherwise affected by the existence or proposed installation of a graywater system servicing the premises.

Holding Tanks

A holding tank is defined in Ordinance 650 as a sewage facility, of a temporary nature, that has no means of discharge. It requires periodic maintenance and shall have a renewable operating permit issued by the Department.

If approval to utilize an OWTS has been denied, a holding tank may be approved provided that the sewering agency which serves the area agrees in writing to the installation of a holding tank and the following conditions are met:

1. A holding tank may be approved for a period not to exceed two years from the date of approval. A "will-serve" letter from the sewering agency for the area shall be submitted which indicates the site will be provided sewer service within the two year period. An extension of the two year connection requirement may be granted for cause. The final approval of the extension rests solely on the Department.
2. The sewering agency for the area assumes responsibility for the operation and maintenance of the holding tank.
3. No wholesale or retail food facilities shall use a holding tank.
4. When a sewer line becomes available, abandonment of the holding tank in the manner approved by the Department is required. Abandonment and connection to the sanitary sewer shall occur within sixty (60) calendar days of sewer availability.
5. A holding tank may be approved as a replacement system for an existing residence when an OWTS is not feasible if approved in writing by the Department.

No holding tank facility shall be placed in any portion of a public right-of-way without written approval from the responsible public agency.

CHAPTER 7 – SANITATION FORM 53 FOR PARCEL AND TRACT SUBDIVISIONS

A Sanitation Form 53 or "SAN53" is a form required by County Ordinance No. 460 (Regulating Land Developments). The form is completed by the Department prior to a developer filing the map and application with the Planning Department.

Requirements to receive a SAN 53 form from the Department

If the project is proposing potable water service and sanitary sewer service from a utility company, the developer must submit the following items to the Department for review:

1. A copy of the tentative map.
2. A current water availability letter or current "will-serve" letter from the appropriate water utility company. This letter must clearly state that the water company will be willing and able to serve potable water after the necessary financial matters have been met.
3. A current sewer availability letter or current "will-serve" letter from the appropriate sewer utility company. This letter must clearly state that the district or agency has sewer capacity in its treatment facilities and is willing to provide sewers to the proposed development after all financial matters have been met.

If the project is proposing potable water service and sanitary sewer service is not available, the developer must submit the following items to the Department for review:

1. A copy of the tentative map which meets the minimum lot size requirements as specified in this LAMP.
2. A current water availability letter or current "will-serve" letter from the appropriate water utility company. This letter must clearly state that the water company will be willing and able to serve water meeting the proper health standards after the necessary financial matters have been met.
3. An OWTS report performed in accordance with the standards set forth by this LAMP.

CHAPTER 8 – PROFESSIONAL OF RECORD AND QUALIFIED SERVICE PROVIDER REGISTRATION, REVOCATION, AND DUE PROCESS

Professional of Record (PR)

Only those individuals trained and educated to perform, understand and evaluate the field conditions and tests, as they relate to OWTS may perform percolation tests. This would include those with experience in OWTS design and hold one of the following State of California credentials and registrations: Professional Engineer (PE), Professional Geologist (PG) or Registered Environmental Health Specialist (REHS). No person shall perform percolation tests or submit a percolation report as described in Chapter 3 within the unincorporated areas of Riverside County and its contracted cities unless registered with the Department as a PR as required in Ordinance 650. A list of approved PRs shall be maintained by the Department.

Initial Registration

Any individual as described above desiring registration as a PR shall complete the following:

1. Submit a complete Professional of Record Registration Application.
2. Provide proof of valid State of California issued license or registration as a Professional Engineer, Professional Geologist, or Registered Environmental Health Specialist.
3. Pay registration fee along with completed application.

Registration is non-refundable, not transferable, and shall expire on December 31st of each year. Registration may be renewed by payment of renewal fee. Any change or lapse in registration shall require the completion of a new PR registration application.

NOTE: An alternative treatment system's manufacturer may have additional requirements for the PR.

Qualified Service Provider (QSP)

A QSP is an individual who is trained to locate, evaluate, certify and service an OWTS, and is familiar with applicable Department forms, policies and procedures. No person shall certify an OWTS or provide an ATU service agreement in the unincorporated areas of Riverside County and its contracted cities unless registered with the Department as a QSP as required in Ordinance 650.

Initial Registration

Any individual desiring registration as a QSP shall meet the following requirements:

1. Submit a complete Qualified Service Provider Registration Application.
2. Provide proof of current C-42, C-36 and/or Class A General Contractor's License issued by the State of California or provide proof of licensing or registration as a Professional Engineer, Professional Geologist, or Registered Environmental Health Specialist.
3. Provide proof of completion of "OWTS Inspector Certification" training through the National Sanitation Foundation, National Association of Wastewater Transporters, or other similarly recognized professional organization approved by the Department.
4. Pay registration fee along with completed application.

Registration is non-refundable, not transferable, and shall expire on December 31st of each year. Registration may be renewed by payment of renewal fee. Any change or lapse in registration shall require the completion of a new QSP registration application.
NOTE: A system's manufacturer may have additional requirements that shall be met in order to function as a QSP for that specific company's products and treatment systems.

Department Oversight

The Department will conduct random audits of services performed by a PR or a QSP. At the discretion of the Department, additional verification may be required including but not limited to, additional soil testing, excavations, and/or inspections of OWTS. PR or QSP registration may be revoked for cause after due process as per County Ord. 650. Upon revocation, a new application and applicable fees will be required. Proof of current "OWTS Inspector Certification" training may also be required.

Registered individuals who violate any provision of this LAMP will be investigated by the Department and appropriate enforcement actions will be taken.

CHAPTER 9 – ONSITE WASTEWATER TREATMENT SYSTEM (OWTS) CERTIFICATION

OWTS Certification

Individuals receiving QSP registration from the County of Riverside shall have the authority to conduct OWTS certifications. OWTS certifications shall include the following:

1. Identify all septic system components, location, and specification.
2. Determine the current condition and functionality of an existing OWTS.
3. Make modifications of an existing OWTS within the manufacturer's recommendations or guidelines.
4. Make repair recommendations and perform needed repairs on an existing OWTS.
5. Identify an existing structure's total bedroom count to ensure proper septic tank sizing.

The QSP shall document their findings of an OWTS certification using Department form entitled "Certification of Existing Subsurface Disposal System". The certification shall also include an appropriately scaled plot plan signed by the QSP. The plot plan shall include the following: design and location of the OWTS and its 100 percent expansion area in relation to its attached dwelling or structure; other detached structures and second units; water meters, wells, rocks, watercourses, dry wells, property corners, driveways, and various surface features such as drainage courses.

An OWTS Certification shall be required for the following:

1. For any major repair and/or modifications performed on an existing OWTS.
2. To ensure there is no encroachment between an existing OWTS, including expansion area, and a proposed construction project.
3. For any project proposing to utilize an existing OWTS.
4. When required for transfer of property/escrow.
5. As required by the Department.

CHAPTER 10 – OWTS REQUIRING CORRECTIVE ACTION UNDER TIER 4

All OWTS have the potential to fail due to age, misuse or improper design and the failure may result in surfacing effluent, wastewater being discharged to the ground surface or wastewater backing up into plumbing fixtures. These failures will move the OWTS into a Tier 4 status requiring corrective action to mitigate any risk to public health or contamination of the environment. This Chapter will detail the corrective action(s) needed to return the OWTS to a Tier 0, 1 ,2 or 3 status in the event an OWTS fails, and enforcement actions that will be taken if the corrective action is not completed within acceptable time frames.

Corrective Action Requirements

1. The Department will complete an investigation to determine the validity of the complaint or other notification of a failing OWTS.
2. Any OWTS that is found to be failing shall have a notice of violation issued to the property owner and/or tenant requiring action to eliminate the immediate health hazard in an approved manner. The notice of violation may also require a repair to be completed to the OWTS as needed within a reasonable time frame.
3. The proposed repair shall be evaluated by the Department to ensure it meets the minimum design requirements of this LAMP or is in substantial conformance to the greatest extent practicable.
4. The repair shall be completed under permit and inspection by the Department.
5. Failure to complete the required corrective action within the time frames given may result in additional enforcement action.

Substandard Systems

All OWTS within Riverside County that do not meet minimum design requirements of this LAMP shall be deemed substandard. Sites with substandard OWTS shall be prohibited from having future additions or modifications to the property that would potentially increase wastewater flow to the OWTS or decrease the amount of usable area available for the OWTS. Cesspools of any kind or size are prohibited.

CHAPTER 11 – ONSITE WASTEWATER TREATMENT SYSTEM USE LIMITATIONS

The Department's oversight of OWTS is limited to those systems as defined in this LAMP. Limitations exist for the use of OWTS related to the amount and type of wastewater flows that will be generated, types of systems, availability of public sewer and setbacks to public water supplies. Requests for any variance can only be reviewed and approved by the respective Regional Water Board. The following will not be authorized by the Department:

1. Construction of new cesspool sewage disposal systems. Upon discovery, existing cesspool sewage disposal systems will be replaced with an approved wastewater disposal system.
2. OWTS receiving a projected flow over 10,000 gallons per day.
3. OWTS receiving a projected waste flow greater than 3,500 gallons per day per 0.5 acre.
4. OWTS that receive high strength wastewater, except from a commercial food service facility with a BOD less than 900 mg/l or that does have a properly sized and functioning oil/grease interceptor.
5. OWTS that utilize any form of effluent disposal that discharges on or above the ground surface such as sprinklers, exposed drip lines, free-surface wetlands, or a pond.
6. Slopes greater than 30 percent without a slope stability report approved by a Professional Engineer or Professional Geologist.
7. Decreased leaching area for IAPMO certified chamber dispersal systems using a multiplier less than 0.80.
8. OWTS utilizing supplemental treatment without requirements for periodic monitoring or inspections.
9. OWTS dedicated to receiving significant amounts of wastes dumped from RV holding tanks.
10. Separation of the bottom of dispersal system to groundwater less than five (5) feet for conventional OWTS, less than two (2) feet with advanced treatment, and less than ten (10) feet for seepage pits.
11. Installation of new or replacement OWTS where connection to a public sewer is a practical option, pursuant to Riverside County Ordinance 650.
12. Except as provided for in Items 12 and 13 below, new or replacement OWTS with minimum horizontal setbacks less than any of the following:
    a) 150 feet from a public water well where the depth of the effluent dispersal system does not exceed 10 feet in depth.
    b) 200 feet from a public water well where the depth of the effluent dispersal system exceeds 10 feet in depth.
    c) Where the effluent dispersal system is within 600 feet of a public water well and exceeds 20 feet in depth, the horizontal setback required to achieve a two-year travel time for microbiological contaminants shall be evaluated by a qualified professional. In no case shall the setback be less than 200 feet.
    d) Where the effluent dispersal system is within 1,200 feet from a public water system's surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as

upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 400 feet from the high water mark of the reservoir, lake or flowing water body.

e) Where the effluent dispersal system is located more than 1,200 feet but less than 2,500 feet from a public water system's surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 200 feet from the high water mark of the reservoir, lake or flowing water body.

13. For replacement OWTS that do not meet the horizontal separation requirements, the replacement OWTS shall meet the horizontal separation to the greatest extent practicable. In such case, the replacement OWTS shall utilize supplemental treatment and other mitigation measures, unless there is no indication that the previous system is adversely affecting the public water source, and there is limited potential that the replacement system could impact the water source based on topography, soil depth, soil texture, and groundwater separation.
14. For new OWTS, installed on parcels of record existing before May 13, 2013 which is the effective date of the State's OWTS Policy, that cannot meet the horizontal separation requirements, the OWTS shall meet the horizontal separation to the greatest extent practicable and shall utilize supplemental treatment for pathogens as specified in Section 10 of the State's OWTS Policy and any other mitigation measures prescribed by the Department.

CHAPTER 12 – DATA COLLECTION AND REPORTING

Data Collection/Reporting/Notifications

As a condition of oversight of OWTS within Riverside County, the Department has certain responsibilities related to data collection and reporting to the Colorado River Basin, Santa Ana, and San Diego Regional Water Quality Control Boards (Regional Water Boards) as well as in some instances to the owners of water systems and the State Water Board's Division of Drinking Water (DDW). This Chapter will detail the data that must be collected and the procedure for reporting to Regional Water Boards and notifications to owners of water systems and the State Water Board DDW.

Reporting to Regional Water Boards

On an annual basis, the Department will collect data and report in tabular spreadsheet format the following information. A copy of the report will be provided to the Colorado River Basin, Santa Ana and San Diego Regional Water Boards no later than February 1st of each year, and will include the preceding reporting period of January 1st to December 31st. At minimum, the annual report will include data for nitrates and pathogens from the following:

1. Random well samples from domestic wells (if reported).
2. Routine real estate transfer samples (if reported).
3. Water quality data reported to the LPA for public water systems less than 200 service connections.
4. Water quality data from initial domestic well sampling.
5. The number, location, and description of permits issued for new and replacement OWTS.
6. Additional water quality data from sampling performed as part of an NPDES permit or as part of a Waste Discharge Requirement, as reported to us by the responsible agency.
7. The volume, location of disposal, and hauler for all liquid waste disposal of septage.

   Note: The Department will direct all public water systems, with less than 200 service connections, to submit all required groundwater sample results through electronic data transfer (EDT) to the SWRCB's Division of Drinking Water Program.

Every fifth year, the Department will submit an assessment report to the applicable regional boards. At a minimum, this assessment report will include monitoring data for nitrates and pathogens, and may include data for other constituents which are needed to adequately characterize the impacts of OWTS on water quality. If water quality is found to be impacted by OWTS, as determined by the Regional Board and the Department, changes in the LAMP will be implemented to address these impacts.

CHAPTER 13 – IMPAIRED WATER BODIES AND AREAS OF SPECIAL CONCERN

Existing, new and replacement OWTS that are near impaired water bodies may be addressed by a TMDL and its implementation program, or special provisions contained in a LAMP. If there is no TMDL or special provisions, new or replacement OWTS within 600 feet of impaired water bodies listed in Attachment 2 of the State's OWTS Policy must meet the applicable specific requirements found in Tier 3 of the State's OWTS Policy (See Appendix VIII).

Currently, there are six (6) impaired water bodies in Riverside County listed in Attachment 2 of the State's OWTS Policy: Canyon Lake; Fulmor Lake; Golden Star Creek; Santa Ana River, Reach 2; Temescal Creek, Reach 6 (Elsinore Groundwater sub basin boundary to Lake Elsinore Outlet); and Palo Verde Outfall Drain and Lagoon. The Department will follow the applicable specific requirements found in Tier 3 of the State's OWTS Policy or develop and obtain approval from the Regional Water Board of its own Advanced Protection Management Program.

The following areas of special concern either prohibit waste discharge or have additional discharge requirements:

1. Mission Springs or Desert Hot Springs Aquifer
    a) The discharge of waste from new or existing individual disposal systems on parcels of less than one-half acre that overlie the Mission Creek Aquifer or the Desert Hot Springs Aquifer in Riverside County is prohibited, if a sewer system is available.
    b) For parcels of one-half acre or greater that overlie the Mission Creek Aquifer or the Desert Hot Springs Aquifer in Riverside County, the maximum number of equivalent dwelling units with individual disposal systems shall be two per acre, if a sewer system is available. The discharge of waste from additional new or existing individual disposal systems is prohibited, if a sewer system is available.
2. Cathedral City Cove Prohibition Area - the discharge of wastewater into the ground through the use of individual subsurface disposal systems in the Cove area of Cathedral City in Riverside County is prohibited.
3. Cherry Valley Community of Interest (CVCOI) – Rising nitrate levels have been observed in the CVCOI. In accordance with Riverside County Ordinance 871, the following prohibitions are in place in the CVCOI:
    a) No application for a new septic system shall be accepted for any lot within the CVCOI unless that system is designed to remove no less than fifty percent (50%) of the nitrogen released in the effluent (advanced treatment, denitrifying systems).
    b) No existing system in the area shall be expanded or otherwise modified to accommodate new construction and/or additional wastewater generating fixtures or appliances.
4. I-10 Corridor at North Indian Canyon Drive and Interstate 10 – New developers must submit a Report of Waste Discharge (ROWD) and application for Waste Discharge Requirements (WDRs) to the Colorado River Basin Water Board for permitting. The area overlies a high quality groundwater aquifer with a drinking water beneficial use. Due to

increasing business development in the area, the Colorado River Basin Water Board requires the use of advanced treatment units for nitrogen removal for new installations. The boundaries of the I-10 Corridor shall be defined as one and one half miles east and west of the Interstate 10 and Indian Canyon Drive interchange and one and one half miles north and south of the Interstate 10 and Indian Canyon Drive interchange.

5. Quail Valley – Because of small lot sizes, high population density, historical failure rates, poor soil conditions, and variable groundwater levels, the following prohibitions are in place on any new OWTS in accordance with Riverside County Ordinance 856:
    a) No new septic systems shall be approved for any lot or parcel within the prohibited area.
    b) No existing OWTS in the prohibited area shall be expanded or otherwise modified to accommodate new construction and/or additional wastewater generating fixtures or appliances.
6. Temecula Valley Wine Country – Potential siting and operational requirements for protection of water quality could include: establishing increased setbacks from capture zones for existing public supply wells, requiring use of advanced treatment systems and flow limits/restrictions for new or replacement OWTS located within close proximity to capture zones of public supply wells, additional monitoring requirements, etc.
7. Homeland/Romoland Prohibition – The prohibition of new OWTS in this area has been in place since 1982. New OWTS are prohibited unless exemption criteria are met.
8. Other areas which may be identified as a special concern by the Regional Board at a later date.

CHAPTER 14 – PUBLIC EDUCATION AND OUTREACH

An OWTS is a significant investment for the property owner especially with the increased costs of newer systems or those that depend on supplemental treatment. Yet, there is a lot of myth and misinformation about how to operate and maintain an OWTS. Education and outreach is critical to supporting an informed homeowner who is better able to assure proper use and operation of an OWTS. Accurate information and education help reduce the chance of failure from an improperly designed or poorly maintained system and protects public health and the environment.

Direct Staff Contact

Education and outreach is achieved primarily by direct interaction between the Department's staff and the public. Specialists receive and respond to phone calls and office visits by property owners, consultants and contractors and answer questions regarding the regulations and/or the permit process. As part of the Department's role in the planning process, we regularly answer questions and provide input to consultants, other departments, agencies, members of the Planning Commission, and the Board of Supervisors.

Department Website

The Department website (www.rivcoeh.org) provides links to the LAMP, applicable county ordinances, various informational bulletins, brochures on proper OWTS maintenance, permit application forms, and office locations with contact information. Our website is updated on a regular basis to provide current information relating to OWTS and land use issues.

Community Outreach

The Department educates the public and stays current with community concerns. Staff routinely attend and participate in local town hall meetings, community councils, advisory committees, land development meetings, planning commission proceedings, and various health and safety fairs. Educational handouts and brochures can be found in Appendix IX.

Voluntary Well Monitoring Program

At this time Riverside County does not have a voluntary well monitoring program. As part of its annual report, the County will explore the implementation of such a program.

APPENDIX I – PERC DATA SHEET FOR SEEPAGE PITS – FIELD COPY

Perc Data Sheet – Field Copy (Seepage Pits)

Project:	Job No.	
Test Hole No.	Tested by:	Date:
Depth of Hole as Drilled:	Before Test:	After Test:

Reading No.	Time	Time Interval (Min)	Total Depth of Hole (Ft)	Initial Water Level (Ft)	Final Water Level (Ft)	▲In Water Level (Ft)	Comments
	_____						
	_____						
	_____						
	_____						
	_____						
	_____						
	_____						
	_____						
	_____						
	_____						
	_____						
	_____						

APPENDIX II – FINAL TEST DATA SHEET FOR SEEPAGE PITS

Final Test Data Sheet – Seepage Pits

$Q = \frac{(F/T) \times (Dx9)}{L\ (Avg.)}$ or $Q = \frac{R \times D \times 9}{L}$, Where R = F/T in ft./hr.

Q = Rate in gallons/sq. ft. of sidewall per day of septic tank effluent
F = Drop during time interval in feet
T = Time interval in hours
D = Diameter of hole in feet
L (Avg.) = Average wetted depth during time interval in feet; Minimum depth is 10 feet.

Project:		Date:	
By:		Remarks:	
Boring No.	Dia.	Depth Before:	Depth After:

Time Read (Min)	Time Interval (Min)	Fall (Ft)	Time Int. (Hr.)	Rate (Ft/Hr.)	Wall Length[1] / Wall Length[2]	Avg. Wall Length (Ft.)	Q (gal / s.f./day)
_____					_____		
_____					_____		
_____					_____		
_____					_____		
_____					_____		
_____					_____		
_____					_____		
_____					_____		
_____					_____		
_____					_____		
_____					_____		

[1]Initial Water Column Height

[2]Final Water Column Height

APPENDIX III – EXAMPLE OF SEEPAGE PIT DATA ENTRY

Typical Example of Seepage Pit Data Entry

Falling Head Perc Data Sheet – Field Copy

Reading No.	Time	Time Interval (Min)	Total Depth of Hole (Ft)	Initial Water Level (Ft)	Final Water Level (Ft)	▲In Water Level (Ft)	Comments
1	10:25		35	3.0			
2	10:55	30	34		8.0	5.0	
3	11:00		34	3.0			
4	11:30	30	33		7.4	4.4	

Final Test Data – Seepage Pits

Time Read (Min)	Time Interval (Min)	Fall (Ft)	Time Int. (Hr.)	Rate (Ft/Hr.)	Wall Length[1] / Wall Length[2]	Avg. Wall Length (Ft.)	Q (gal / s.f./day)
10:25 / 10:55	30	5.0	0.5	10	35-2=32 / 34-8=26	29	1.55
11:00 / 11:30	30	4.4	0.5	8.8	34-3=31 / 33-7.4=25.6	28.3	1.40

APPENDIX IV – LEACH FIELD PERCOLATION DATA SHEET

Leach Line Percolation Data Sheet

Project	Job No.	
Test Hole No.	Date Excavated:	
Depth of Test Hole:	Soil Classification	
Check for Sandy Soil Criteria Tested by:	Date:	Presoak:
Actual Percolation Tested by:	Date:	

Sandy Soil Criteria Test

Trial No.	Time	Time Interval (Min)	Initial Water Level (Inches)	Final Water Level (Inches)	▲in Water Level (Inches)
1	_____				
2	_____				

Use: Normal Sandy (Circle One) Soil Criteria

Time	Time Interval (Min)	Total Elapsed Time (Min)	Initial Water Level (Inches)	Final Water Level (Inches)	▲in Water Level (Inches)	Percolation Rate (Min/Inch)
_____						
_____						
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APPENDIX V – DEEP BORING SOIL PROFILE DATA SHEET

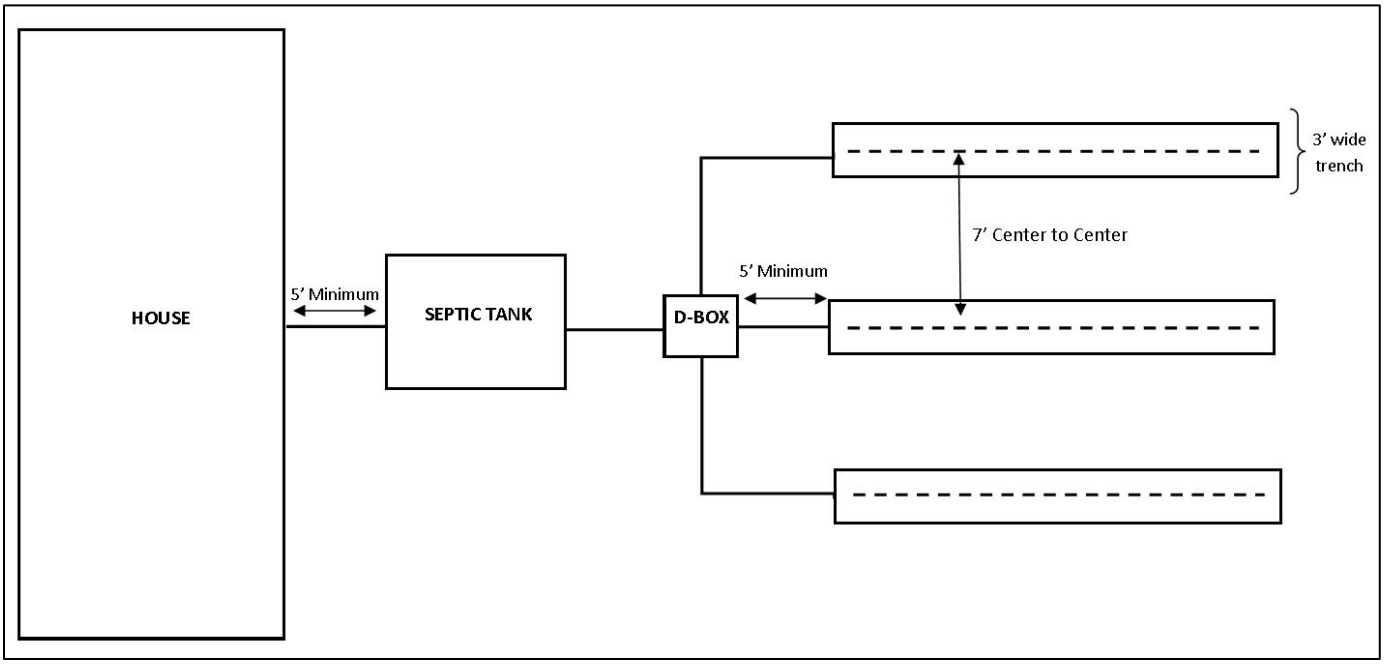
Deep Boring Soil Profile

Field Log No.			
Job No.	Date:		Elevation:
Project Name:	Reference		
Logged by:	Location:		
Assistant:	Water Level:		
Drilling Company:	Time:		
	Setup:	Start:	Stop:
Drilling Method:	Driving Weight:		Drop Height:

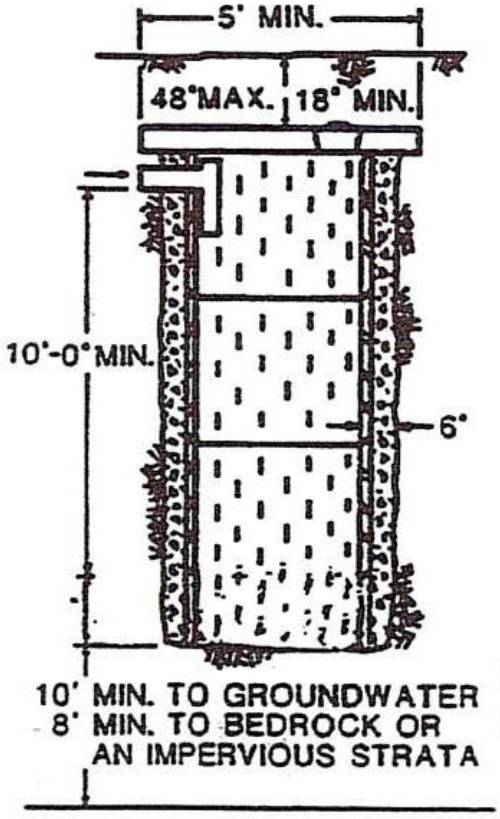
Depth (Feet)	Samples	Blow Count	USCS Symbol	Material Description (consistency, moisture, color)	Remarks

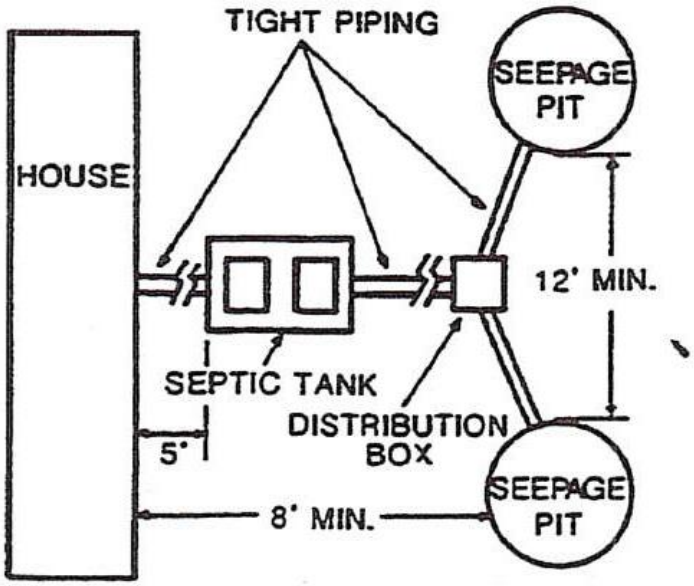
APPENDIX VI – TYPICAL LEACH LINE AND SEEPAGE PIT

LEACH LINE DESIGN

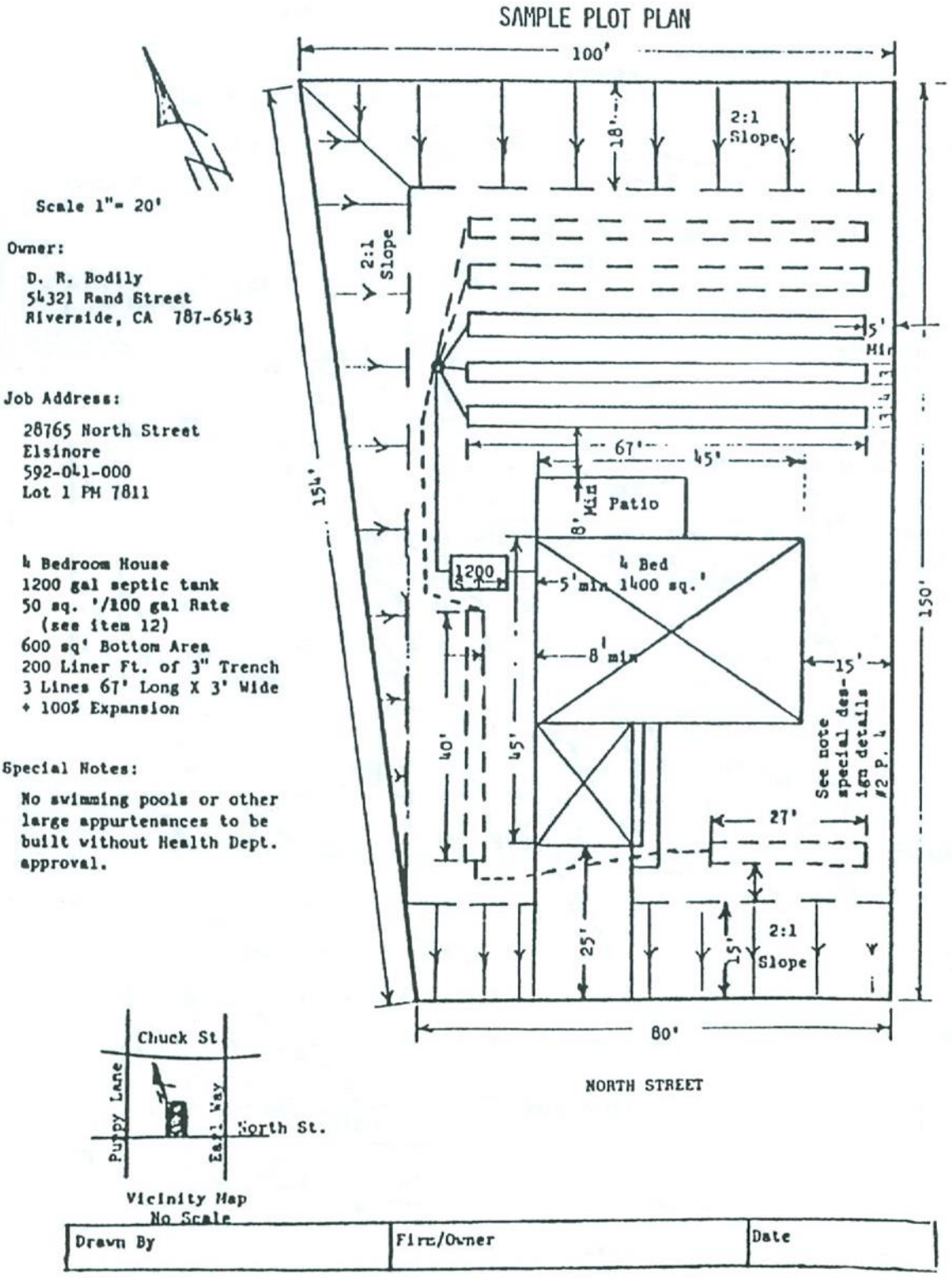


SEEPAGE PIT DESIGN



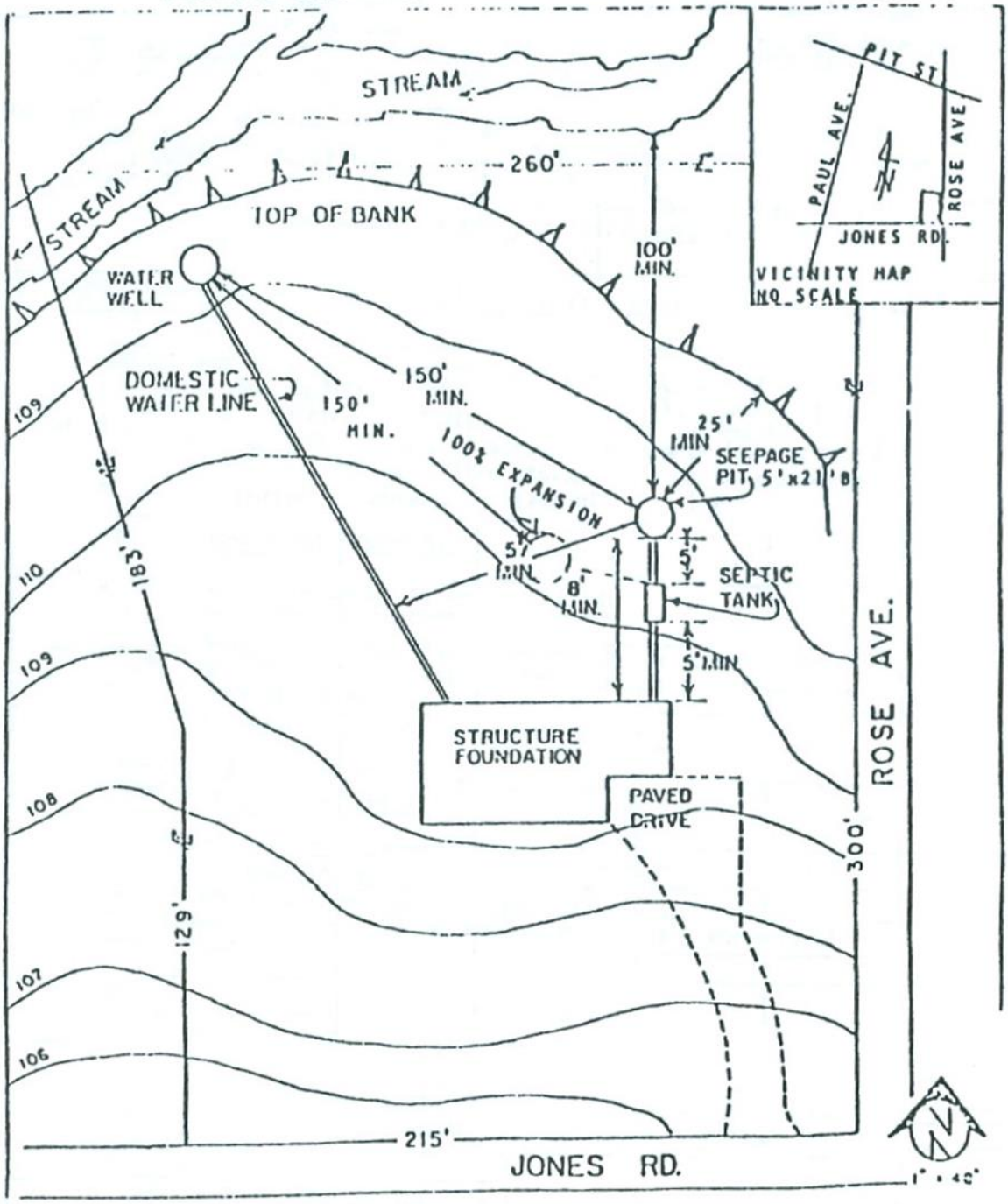


APPENDIX VII – SAMPLE PLOT PLANS



SAMPLE PLOT PLAN

SHOWING SEEPAGE PIT AND PROPER SETBACKS



OWNER	JOB ADDRESS	SYSTEM DESIGN	DRAWN BY
J. SMITH	24315 JONES RD.	3 BEDROOM HOUSE	C E ENGINEERING
420 4TH ST.	ELSINORE, CA	1000 GAL SEPTIC TANK	BOB SMITH
RIVERSIDE, CA	592-041-000	3 GAL/SQ.'/DAY	8-12-80
PH. 787-2852	LOT 10 PM 2478	1-5'x21' BELOW INLET SEEPAGE PIT	

APPENDIX VIII – TIER 3 IMPAIRED AREAS (FROM STATE OWTS POLICY)

Tier 3 – Advanced Protection Management Programs for Impaired Areas

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

10.0 Advanced Protection Management Program

An Advanced Protection Management Program is the minimum required management program for all OWTS located near a water body that has been listed as impaired due to nitrogen or pathogen indicators pursuant to Section 303(d) of the Clean Water Act. Local agencies are authorized to implement Advanced Protection Management Programs in conjunction with an approved Local Agency Management Program or, if there is no approved Local Agency Management Program, Tier 1. Local agencies are encouraged to collaborate with the Regional Water Boards by sharing any information pertaining to the impairment, provide advice on potential remedies, and regulate OWTS to the extent that their authority allows for the improvement of the impairment.

10.1 The geographic area for each water body's Advanced Protection Management Program is defined by the applicable TMDL, if one has been approved. If there is not an approved TMDL, it is defined by an approved Local Agency Management Program, if it contains special provisions for that water body. If it is not defined in an approved TMDL or Local Agency Management Program, it shall be 600 linear feet [in the horizontal (map) direction] of a water body listed in Attachment 2 where the edge of that water body is the natural or levied bank for creeks and rivers, the high water mark for lakes and reservoirs, and the mean high tide line for tidally influenced water bodies, as appropriate. OWTS near impaired water bodies that are not listed on Attachment 2, and do not have a TMDL and are not covered by a Local Agency Management Program with special provisions, are not addressed by Tier 3.

10.2 The requirements of an Advanced Protection Management Program will be in accordance with a TMDL implementation plan, if one has been adopted to address the impairment. An adopted TMDL implementation plan supersedes all other requirements in Tier 3. All TMDL implementation plans adopted after the effective date of this Policy that contain load allocations for OWTS shall include a schedule that requires compliance with the load allocations as soon as practicable, given the watershed-specific circumstances. The schedule shall require that OWTS implementation actions for OWTS installed prior to the TMDL implementation plan's effective date shall commence within 3 years after the TMDL implementation plan's effective date, and that OWTS implementation actions for OWTS installed after the TMDL implementation plan's effective date shall commence immediately. The TMDL implementation plan may use some or all of the Tier 3 requirements and shall establish the applicable area of

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

10.3 In the absence of an adopted TMDL implementation plan, the requirements of an Advanced Protection Management Program will consist of any special provisions for the water body if any such provisions have been approved as part of a Local Agency Management Program.

10.4 The Regional Water Boards shall adopt TMDLs for impaired water bodies identified in Attachment 2, in accordance with the specified dates.

10.4.1 If a Regional Water Board does not complete a TMDL within two years of the time period specified in Attachment 2, coverage under this Policy's waiver of waste discharge requirements shall expire for any OWTS that has any part of its dispersal system discharging within the geographic area of an Advanced Protection Management Program. The Regional Water Board shall issue waste discharge requirements, general waste discharge requirements, waivers of waste discharge requirements, or require corrective action for such OWTS. The Regional Water Board will consider the following when establishing the waste discharge requirements, general waste discharge requirements, waivers of waste discharge requirements, or requirement for corrective action:

10.4.1.1 Whether supplemental treatment should be required.

10.4.1.2 Whether routine inspection of the OWTS should be required.

10.4.1.3 Whether monitoring of surface and groundwater should be performed.

10.4.1.4 The collection of a fee for those OWTS covered by the order.

10.4.1.5 Whether owners of previously-constructed OWTS should file a report by a qualified professional in accordance with section 10.5.

10.4.1.6 Whether owners of new or replacement OWTS should file a report of waste discharge with additional supporting technical information as required by the Regional Water Board.

10.5 If the Regional Water Board requires owners of OWTS to submit a qualified professional's report pursuant to Section 10.4.1.5, the report shall include a determination of whether the OWTS is functioning properly and as designed or requires corrective actions per Tier 4, and regardless of its state of function, whether it is contributing to impairment of the water body.

10.5.1 The qualified professional's report may also include, but is not limited to:

10.5.1.1 A general description of system components, their physical layout, and horizontal setback distances from property lines, buildings, wells, and surface waters.

10.5.1.2 A description of the type of wastewater discharged to the OWTS such as domestic, commercial, or industrial and classification of it as domestic wastewater or high-strength waste.

10.5.1.3 A determination of the systems design flow and the volume of wastewater discharged daily derived from water use, either estimated or actual if metered.

10.5.1.4 A description of the septic tank, including age, size, material of construction, internal and external condition, water level, scum layer thickness, depth of solids, and the results of a one-hour hydrostatic test.

10.5.1.5 A description of the distribution box, dosing siphon, or distribution pump, and if flow is being equally distributed throughout the dispersal system, as well as any evidence of solids carryover, clear water infiltration, or evidence of system backup.
10.5.1.6 A description of the dispersal system including signs of hydraulic failure, condition of surface vegetation over the dispersal system, level of ponding above the infiltrative surface within the dispersal system, other possible sources of hydraulic loading to the dispersal area, and depth of the seasonally high groundwater level.
10.5.1.7 A determination of whether the OWTS is discharging to the ground's surface.
10.5.1.8 For a water body listed as an impaired water body for pathogens, a determination of the OWTS dispersal system's separation from its deepest most infiltrative surface to the highest seasonal groundwater level or fractured bedrock.
10.5.1.9 For a water body listed as an impaired water body for nitrogen, a determination of whether the groundwater under the dispersal field is reaching the water body, and a description of the method used to make the determination.
10.6 For new, replacement, and existing OWTS in an Advanced Protection Management Program, the following are not covered by this Policy's waiver but may be authorized by a separate Regional Water Board order:
10.6.1 Cesspools of any kind or size.
10.6.2 OWTS receiving a projected flow over 10,000 gallons per day.
10.6.3 OWTS that utilize any form of effluent disposal on or above the ground surface.
10.6.4 Slopes greater than 30 percent without a slope stability report approved by a registered professional.
10.6.5 Decreased leaching area for IAPMO certified dispersal systems using a multiplier less than 0.70.
10.6.6 OWTS utilizing supplemental treatment without requirements for periodic monitoring or inspections.
10.6.7 OWTS dedicated to receiving significant amounts of wastes dumped from RV holding tanks.
10.6.8 Separation of the bottom of dispersal system to groundwater less than two (2) feet, except for seepage pits, which shall not be less than 10 feet.
10.6.9 Minimum horizontal setbacks less than any of the following:
10.6.9.1 150 feet from a public water well where the depth of the effluent dispersal system does not exceed 10 feet in depth;
10.6.9.2 200 feet from a public water well where the depth of the effluent dispersal system exceeds 10 feet in depth:
10.6.9.3 Where the effluent dispersal system is within 600 feet of a public water well and exceeds 20 feet in depth the horizontal setback required to achieve a two-year travel time for microbiological contaminants shall be evaluated. A qualified professional shall conduct this evaluation. However in no case shall the setback be less than 200 feet.
10.6.9.4 Where the effluent dispersal system is within 1,200 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 400 feet from the high water mark of the reservoir, lake or flowing water body.

10.6.9.5 Where the effluent dispersal system is located more than 1,200 feet but less than 2,500 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 200 feet from the high water mark of the reservoir, lake or flowing water body.
10.6.9.6 For replacement OWTS that do not meet the above horizontal separation requirements, the replacement OWTS shall meet the horizontal separation to the greatest extent practicable. In such case, the replacement OWTS shall utilize supplemental treatment and other mitigation measures.
10.6.9.7 For new OWTS, installed on parcels of record existing at the time of the effective date of this Policy, that cannot meet the above horizontal separation requirements, the OWTS shall meet the horizontal separation to the greatest extent practicable and shall utilize supplemental treatment for pathogens as specified in section 10.10 and any other mitigation measures as prescribed by the permitting authority.
10.7 The requirements contained in Section 10 shall not apply to owners of OWTS that are constructed and operating, or permitted, on or prior to the date that the nearby water body is added to Attachment 2 who commit by way of a legally binding document to connect to a centralized wastewater collection and treatment system regulated through WDRs as specified within the following timeframes:
10.7.1 The owner must sign the document within forty-eight months of the date that the nearby water body is initially listed on Attachment 2.
10.7.2 The specified date for the connection to the centralized community wastewater collection and treatment system shall not extend beyond nine years following the date that the nearby water body is added to Attachment 2.
10.8 In the absence of an adopted TMDL implementation plan or Local Agency Management Program containing special provisions for the water body, all new or replacement OWTS permitted after the date that the water body is initially listed in Attachment 2 that have any discharge within the geographic area of an Advanced Protection Management Program shall meet the following requirements:
10.8.1 Utilize supplemental treatment and meet performance requirements in 10.9 if impaired for nitrogen and 10.10 if impaired for pathogens,
10.8.2 Comply with the setback requirements of Section 7.5.1 to 7.5.5, and
10.8.3 Comply with any applicable Local Agency Management Program requirements.
10.9 Supplemental treatment requirements for nitrogen
10.9.1 Effluent from the supplemental treatment components designed to reduce nitrogen shall be certified by NSF, or other approved third party tester, to meet a 50 percent reduction in total nitrogen when comparing the 30-day average influent to the 30-day average effluent.
10.9.2 Where a drip-line dispersal system is used to enhance vegetative nitrogen uptake, the dispersal system shall have at least six (6) inches of soil cover.
10.10 Supplemental treatment requirements for pathogens
10.10.1 Supplemental treatment components designed to perform disinfection shall provide sufficient pretreatment of the wastewater so that effluent from the supplemental treatment components does not exceed a 30-day average TSS of 30 mg/L and shall further achieve an

effluent fecal coliform bacteria concentration less than or equal to 200 Most Probable Number (MPN) per 100 milliliters.

10.10.2 The minimum soil depth and the minimum depth to the anticipated highest level of groundwater below the bottom of the dispersal system shall not be less than three (3) feet. All dispersal systems shall have at least twelve (12) inches of soil cover.

10.11 OWTS in an Advanced Protection Management Program with supplemental treatment shall be designed to meet the applicable performance requirements above and shall be stamped or approved by a Qualified Professional.

10.12 Prior to the installation of any proprietary treatment OWTS in an Advanced Protection Management Program, all such treatment components shall be tested by an independent third party testing laboratory.

10.13 The ongoing monitoring of OWTS in an Advanced Protection Management Program with supplemental treatment components designed to meet the performance requirements in Sections 10.9 and 10.10 shall be monitored in accordance with the operation and maintenance manual for the OWTS or more frequently as required by the local agency or Regional Water Board.

10.14 OWTS in an Advanced Protection Management Program with supplemental treatment components shall be equipped with a visual or audible alarm as well as a telemetric alarm that alerts the owner and service provider in the event of system malfunction. Where telemetry is not possible, the owner or owner's agent shall inspect the system at least monthly while the system is in use as directed and instructed by a service provider and notify the service provider not less than quarterly of the observed operating parameters of the OWTS.

10.15 OWTS in an Advanced Protection Management Program designed to meet the disinfection requirements in Section 10.10 shall be inspected for proper operation quarterly while the system is in use by a service provider unless a telemetric monitoring system is capable of continuously assessing the operation of the disinfection system. Testing of the wastewater flowing from supplemental treatment components that perform disinfection shall be sampled at a point in the system after the treatment components and prior to the dispersal system and shall be conducted quarterly based on analysis of total coliform with a minimum detection limit of 2.2 MPN. All effluent samples must include the geographic coordinates of the sample's location. Effluent samples shall be taken by a service provider and analyzed by a California Department of Public Health certified laboratory.

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

APPENDIX IX – EDUCATION AND OUTREACH

1. Educational Brochure: The Homeowner's Guide: The Proper Care and Maintenance of Onsite Wastewater Treatment Systems (Available in print and electronic format)

The Homeowner's Guide: The Proper Care and Maintenance of Onsite Wastewater Treatment Systems - Page 1

HOW DOES A SEPTIC SYSTEM WORK?

A typical septic system consists of a septic tank and a absorption field, or soil absorption field. Below is a brief overview of how septic systems work.

- All water runs out of your house from one main drainage pipe into a septic tank.
- The septic tank is a buried, water-tight container usually made of concrete, fiberglass, or polyethylene. Its job is to hold the wastewater long enough to allow solids to settle down to the bottom (forming sludge), while the oil and grease float to the top (as scum). Compartments and a T-shaped outlet prevent the sludge and scum from leaving the tank and traveling into the absorption field.
- The liquid wastewater (effluent) then exits the tank into the absorption field. If the absorption field is overloaded with too much liquid, it will flood, causing sewage to flow to the surface of the ground or create backups in toilets and sinks.
- Finally, the wastewater percolates into the soil, naturally removing harmful bacteria, and viruses.

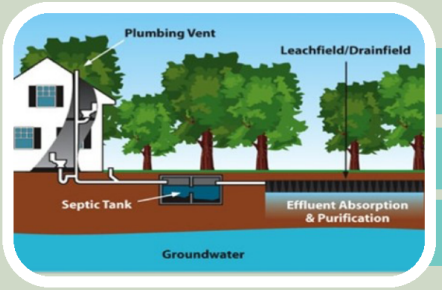
DO I HAVE A SEPTIC SYSTEM? IF SO, HOW CAN I FIND IT?

Here are a few tips to determine if you have a septic system and how to locate it.
You most likely have a system if:

- You are on well water.
- The water line coming into your house does not have a meter.
- Your neighbors have a septic system.

You can find your septic system by:

- Looking on the detailed plot plans for your home.
- Checking your yard for lids or manhole covers.
- Using an inspector/pumper, who can also help you find exactly where the system is located.



IS MY SEPTIC SYSTEM WORKING PROPERLY?

You can suspect a malfunctioning absorption field if:

1. There are odors, persistent wet spots and/or lush green growth in any areas of your system.
2. Your waste plumbing becomes sluggish over a period of time, when it is being used heavily or during wet weather.
3. Problems persist even though the septic system tank has been pumped or cleaned recently.

WHAT IF MY SEPTIC SYSTEM OVERFLOWS OR HAS MAINTENANCE ISSUES?

ANY DISCHARGE OF SEWAGE MUST BE STOPPED IMMEDIATELY AND PROPERLY DISINEFCTED. CONTACT A QUALIFIED SERVICE PROVIDER FOR EVALUATION AND REPAIRS.

HOW DO I MAINTAIN MY SYSTEM?

The most important step in maintaining a trouble-free septic system operation is to remove the accumulated solid residues and scum from the tank BEFORE they start to wash out into the absorption field and BEFORE you begin to observe signs that your system is failing. Your tank should be serviced every 3-5 years or more often depending on the:

- size of the tank
- number of people in your household
- kinds of wastewater discharging appliances you use
- type of system or filters you use

1

STEP 1 - MINIMIZE THE LIQUID LOAD

The less wastewater you produce, the less the soil will have to absorb. Water conservation is the cheapest and easiest way to protect your septic system.

2

STEP 2 - MINIMIZE THE SOLIDS LOAD

Do not use your septic system for anything that can be disposed of some other way.

- Avoid using the garbage disposal unit.
- Reduce the amount of grease, fats, and solids entering the septic system. Do not flush products such as diapers, feminine hygiene products, kitty litter, cigarette butts or coffee grounds.

3

STEP 3 - PROTECT THE INSTALLED SYSTEM

- Do not plant large trees over the absorption field.
- Do not allow water to pond over absorption field.
- Do not park or drive on your absorption field.
- Keep absorption field in an uncovered open sunny area to provide maximum transpiration.

2. Educational Brochure: The Homeowner's Guide: The Proper Care and Maintenance of Alternative Treatment Systems (Available in print and electronic format)

The Homeowner's Guide: The Proper Care and Maintenance of Alternative Treatment Systems – Page 1

WHAT IS AN ALTERNATIVE TREATMENT SYSTEM?

Advanced treatment systems (ATUs) are subsurface wastewater treatment systems that may be utilized when criteria for a conventional OWTS cannot be met. These systems use various technological methods to treat wastewater from household plumbing produced by bathrooms, kitchen drains, and laundries. Examples of ATUs include aerobic systems, sand filters, and pressurized drip systems.

WHY IS IT IMPORTANT TO PROPERLY MAINTAIN MY ALTERNATIVE TREATMENT UNIT?

It saves money!
Malfunctioning systems can cost $8,000-$20,000 to repair or replace compared to annual maintenance costs of about $500-1000 in service agreement fees. It is recommended to maintain annual service agreements for all alternative systems.
It protects the value of your home.
Malfunctioning septic systems can drastically reduce property values, hamper the sale of your home, and even pose a legal liability.
It keeps your water clean and safe.
A properly maintained system helps keep your family's drinking water pure, and reduces the risk of contaminating community, local, and regional waters.
It keeps the environment clean.
Malfunctioning septic systems can harm the local ecosystem by killing native plants, fish, and shellfish.

WHEN SHOULD I CONTACT ENVIRONMENTAL HEALTH?

- If you need to install a new alternative treatment system
- If you need to make any major repair to your advanced treatment system
- If you are remodeling your home
- If you are adding a pool or additional structure

WHAT ARE MY RESPONSIBILITIES AS AN OWNER OF AN ALTERNATIVE TREATMENT SYSTEM?

- Obtain and renew your annual renewable operating permit for your system.
- Maintain a service agreement with a Qualified Service Provider (QSP) trained by the manufacturer.
- Obtain an annual inspection by the QSP to ensure proper operation and maintenance of the system.

COUNTY OF RIVERSIDE
DEPARTMENT OF
ENVIRONMENTAL HEALTH
P.O. Box 7909
Riverside, CA 92513-7909
Phone: (888) 722-4234
WWW.RIVCOEH.ORG

ENVIRONMENTAL HEALTH
COUNTY OF RIVERSIDE
Protecting People and the Environment

The Homeowner's Guide:

THE PROPER CARE AND MAINTENANCE OF ALTERNATIVE TREATMENT SYSTEMS (ATUs)

County of Riverside Department of Environmental Health

The Homeowner's Guide: The Proper Care and Maintenance of Alternative Treatment Systems – Page 2

HOW DOES AN ATU WORK?

There are several types of alternative treatment systems which consist of, but are not limited to: a septic tank, pump chambers, filter medium, grinder pump, oxygen chamber, and absorption fields. Below is a brief overview of how alternative treatment systems work.

- All water runs out of your house from one main drainage pipe into a septic tank.
- The septic tank is a buried, water-tight container usually made of concrete, fiberglass, or polyethylene. It holds the wastewater long enough to allow solids to settle down to the bottom (forming sludge), while the oil and grease float to the top (as scum). A pump is placed in the effluent chamber prior to moving to next the phase of oxygenation and/or filtration for pre-treatment.
- The pre-treated waste is then sent out to the absorption field which has various engineered designs (based on soil/site restrictions). The absorption field is "dosed" with the appropriate amount of liquid calculated by the engineering analysis.
- Finally, the treated wastewater percolates into the soil, naturally removing any leftover harmful bacteria, and viruses.

DO I HAVE AN ATU? IF SO, HOW CAN I FIND IT?

Here are a few tips to determine if you have an alternative treatment system and how to locate it.

You most likely have a system if:

- You are on well water.
- The water line coming into your house does not have a meter.
- Your neighbors have a septic system.

You can find your system by:

- Looking on the detailed plot plans for your home.
- Checking your yard for lids or manhole covers.
- Using an inspector/pumper, who can also help you find exactly where the system is located.

IS MY ATU WORKING PROPERLY?

Warning signs of system problems:

1. There are sewage odors, persistent wet spots and/or lush green growth in areas of your system.
2. Alarms or lights going off.
3. Excessive solids, foam, or scum in the unit.
4. Your waste plumbing becomes sluggish.
5. Any changes in the system's normal operating sound.

WHAT IF MY SYSTEM OVERFLOWS OR HAS MAINTENANCE ISSUES?

ANY DISCHARGE OF SEWAGE MUST BE STOPPED IMMEDIATELY AND PROPERLY DISINEFCTED. CONTACT A QUALIFIED SERVICE PROVIDER FOR EVALUATION AND REPAIRS.

HOW DO I MAINTAIN MY SYSTEM?

The most important step in maintaining a trouble-free alternative treatment system is to follow the engineered design guidelines and manufacturer's recommendations. You should also keep a copy of your approved documents and plans for your system. It is required that an authorized service provider maintain your system on an annual basis. Most service providers offer maintenance two times per year based on:

- size of the tank/system
- kinds of wastewater discharging appliances you use
- type of system or filters you use
- occupancy usage

1 STEP 1 - MINIMIZE THE LIQUID LOAD

The amount of waste water being treated is based on the engineering design and occupancy.

2 STEP 2 - MINIMIZE THE SOLIDS LOAD

Do not use your system for anything that can be disposed of some other way.

- Avoid using the garbage disposal unit.
- Reduce the amount of grease, fats, and solids entering the system. Do not flush products such as diapers, feminine hygiene products, kitty litter, cigarette butts or coffee grounds

3 STEP 3 - PROTECT THE INSTALLED SYSTEM

- Do not plant large trees over the absorption field.
- Do not allow water to pond over absorption field.
- Do not park or drive on your absorption field.
- Keep absorption fields in an uncovered open sunny area to provide maximum transpiration.
- Use of commercial additives are usually not needed or recommended.

APPENDIX X – RIVERSIDE COUNTY ORDINANCE NO. 650.6

ORDINANCE NO. 650.6

AN ORDINANCE OF THE COUNTY OF RIVERSIDE REGULATING THE DISCHARGE OF SEWAGE IN THE UNINCORPORATED AREAS OF THE COUNTY OF RIVERSIDE AND INCORPORATING BY REFERENCE THE RIVERSIDE COUNTY LOCAL AGENCY MANAGEMENT PROGRAM (LAMP)

SECTION 1. PURPOSE AND INTENT.

New legislation was adopted by the State Water Resources Control Board in an effort to protect water quality and public health by establishing regulations for the installation, replacement, and performance of Onsite Wastewater Treatment Systems (OWTS). The County has incorporated these changes into its Local Agency Management Program (LAMP). The purpose of this Ordinance is to provide for the enforcement of the provisions of the LAMP in accordance with state laws.

SECTION 2. DEFINITIONS.

A) "**Alternative Treatment System**" or "**Alternative OWTS**" or "**ATU**" shall mean any OWTS that does not meet the criteria of a conventional OWTS, but is allowed under conditions specified by the Department.

B) **"Approval"** shall mean the written approval by the Director or his designated representative of a plan to install, construct, reconstruct, convert or alter any OWTS which discharges or disposes of sewage, sewage effluent, or non-hazardous waste.

C) "**Construction Permit**" shall mean a permit issued by the Department authorizing the permittee to install, construct, reconstruct, convert or alter any OWTS.

D) "**Conventional Septic System**" shall mean an OWTS consisting of a septic tank and Department approved subsurface gravity dispersal system.

E) **"Critical Area"** shall mean those areas determined to be difficult for installation of an OWTS due to, but not limited to one or more of the following: lot size, seasonal groundwater, slope, poor soil conditions or impaired water basins.

F) "**Department**" shall mean the Riverside County Department of Environmental Health.

G) **"Director"** shall mean the Director of the Department of Environmental Health or his or her designated representative.

H) "**Dispersal System**" shall mean a leach field, seepage pit, subsurface drip field, or other type of system for final wastewater treatment and subsurface discharge.

I) **"Failure"** shall mean a condition of an OWTS that threatens public health or water quality by creating a potential for direct or indirect contact between sewage and the public. Examples of failure include:

1. Sewage leaking to ground surface or groundwater;
2. Sewage backing up into a structure caused by slow OWTS soil absorption of septic tank effluent;
3. Inadequately treated sewage causing pollution of groundwater or surface water;
4. Noncompliance with standards stipulated in the permit issued for the OWTS based upon the protection of human health, water quality and the environment.

J) **"Holding Tank"** shall mean a sewage facility, of a temporary nature, that has no means of discharge and requires periodic maintenance and shall have a renewable operating permit issued by the Department.

K) **"LAMP"** shall mean Local Agency Management Program. This program implements local standards for new and replacement OWTS consistent with the OWTS Policy adopted by the State Water Resources Control Board on June 19, 2012.

L) **"Major Repair**" shall mean OWTS improvements or corrective work where such improvements involve the replacement, enlargement, or modification of a septic tank, treatment unit, or dispersal system (excluding non-perforated distribution pipes), regardless of whether or not a failure condition exists. Such repairs shall require a construction permit from the Department.

M) "**Onsite Wastewater Treatment System(s**)" or "**OWTS"** shall mean any individual onsite wastewater treatment, pretreatment and dispersal system including, but not limited to, a conventional or alternative OWTS having a subsurface discharge.

N) **"Operating permit"** shall mean an annual permit issued by the Department authorizing the permittee to operate an OWTS.

O) **"Permit"** shall mean either a construction permit or operating permit as defined within this section.

P) **"Person"** shall mean any individual, firm, association, organization, partnership, business trust, corporation, company, State agency or department, or unit of local government.

Q) **"Professional of Record"** or **"PR"** means an individual certified by the State of California as a Professional Engineer (PE), Professional Geologist (PG) or Registered Environmental Health Specialist (REHS) who has accepted responsibility for the design of the OWTS including any required grading. The Professional of Record will have affixed his/her signature and stamp to the system plans and plan proposal.

R) "**Qualified Service Provider**" or "**QSP**" is a California State Licensed Contractor with knowledge and competency in OWTS design, construction, operation, maintenance and monitoring through experience and/or education. A qualified service provider must meet certification requirements as established by the Director and be currently registered with the Department as a QSP.

S) "**Soil**" is the naturally occurring body of porous mineral and organic materials on the land surface, and is composed of unconsolidated materials above bedrock. Soil is composed of sand-sized, silt-sized, and clay-sized particles mixed with varying amounts of larger fragments and organic material. The various combinations of particles differentiate specific soil textures identified in the USDA Soil Classification Chart. For the purposes of this Ordinance, soil shall contain earthen material having more than 50% of its volume composed of particles smaller than 0.08 inches (2 mm) in size.

T) **"Sewage"** or **"Sewage Effluent"** shall mean waste as defined in Section 5410(a), California Health and Safety Code.

U) **"Sewage Facilities"** shall mean OWTS, sanitary sewer connections, holding tanks, alternative systems or other methods of disposing of sewage as approved by the Director.

V) "**System Certification**" is an expression of professional opinion that the OWTS, or its components, meet industry standards that are the subject of the certification but do not constitute a warranty or guarantee, either expressed or implied. System certifications shall be performed by a Qualified Service Provider using forms and procedures established or approved by the Director.

W) "**Weathered Bedrock**" is rock that has been exposed to the atmosphere at or near the earth's surface and changed in color, texture, composition, firmness, and/or form as a result of the exposure with little or no transport of loosened or altered material. For purposes of this Ordinance, weathered bedrock is not soil.

SECTION 3. GENERAL REQUIREMENTS FOR OWTS APPROVAL AND CONSTRUCTION PERMIT.

A) No person shall erect, construct, rebuild, convert or alter any plumbing system designed for the discharge or disposal of sewage or sewage effluent unless he has first obtained a written approval for such purpose from the Director. In designated areas of Riverside County, this approval shall also constitute a construction permit.

B) OWTS design, installation, construction and operation shall be in compliance with the LAMP and the minimum standards of the most recent edition of the Uniform Plumbing Code. Such requirements may be amended from time to time.

C) No OWTS will be approved nor application for OWTS processed where connection to a sanitary sewer is a practical option.

SECTION 4. APPLICATION REVIEW PROCESS FOR OWTS APPROVAL

A) Any person desiring approval of an OWTS shall submit an application on a form to be provided by the Department. Such application shall be accompanied by a fee as required in Riverside County Ordinance No. 640 and as amended. The application shall contain the following information:

1) Name and address of applicant.

2) Location of the proposed installation or reconstruction.

3) A scaled, engineered contoured plot plan describing the proposed construction or alteration in sufficient detail to enable the Director to determine whether the proposed installation or alteration is in compliance with the LAMP and this Ordinance. All drawings must be made on a scale not less than 1"=40'.

4) Percolation test results, if required, as described in the LAMP.

5) A groundwater/bedrock evaluation, if required, as described in the LAMP.

B) Initial Application Review

1) All applications for conventional OWTS shall be approved or denied, in whole or in part, within fifteen (15) working days after the date of filing.

2) Applications for Alternate OWTS shall be approved or denied, in whole or in part, within thirty (30) working days after the date of filing.

3) If an application is denied, in whole or in part, the applicant may amend the application and submit the amended application within 1 year of the original submittal date. Resubmittals received after one year shall be considered a new application and subject to new application fees.

C) Revocations of Approvals or Permits

1) An approval or permit may be revoked by the Director for failure of the applicant to provide proper, complete and accurate information regarding site conditions for a proposed OWTS.

2) An approval or permit previously granted may be rescinded if soil conditions change significantly prior to construction in a manner that would affect the proper operation of an OWTS or the Director determines that exigent circumstances exist which demonstrate a threat to the public health or safety.

D) Appeals Process

1) Any person whose application for an approval or permit has been denied, in whole or in part, or entire approval or permit has been revoked may appeal this action to the Director. The person shall file with the Department a written request for a hearing setting forth the grounds for the request within ten (10) working days from the date the permit application was denied or revoked. Failure to submit the request within the timeframe specified will be deemed a waiver of the right to such hearing.

2) Hearing Procedure. The Hearing Officer shall be the Director or the Director's designee. The hearing shall be set for a date within ten (10) working days from the date the written request is received by the Department unless extended at the request of the petitioner. At the time and place set for the hearing, the Hearing Officer shall give the petitioner and other interested persons, adequate opportunity to present any facts pertinent to the matter at hand and to show cause why the permit or application should not be denied. The Hearing Officer may, when deemed necessary, continue any hearing by setting a new time and place and by giving notice to the petitioner of such action. At the close of the hearing, or within ten (10) working days thereafter, the Hearing Officer shall provide a written notice of disposition of the permit application or permit, notifying the petitioner of the Hearing Officer's final determination.

E) OWTS Installation

1) The installation shall be performed in a manner that is consistent with the approved plan design. In the event that conditions on site prevent the installation

or function of the OWTS as designed, a revised design plan must be submitted to and approved by the Department prior to installation.

2) Construction Inspection. All OWTS shall require a construction inspection and final approval by either the Department or the Department of Building and Safety prior to use.

SECTION 5. OPERATING PERMITS FOR ALTERNATIVE OWTS.

A) All new Alternative OWTS shall require a QSP maintenance agreement and an annual operating permit.

B) Alternative OWTS shall be inspected yearly by a QSP, unless otherwise specified by the manufacturer or the Department.

C) Renewal of subsequent operating permits shall be completed by the property owner or agent on or before the expiration date and shall include evidence of a current QSP maintenance agreement and annual evaluation/inspection report.

D) Within 60 days of a change of ownership, the new owner or owners must transfer the operating permit into his, her or their names, using forms provided by the Department.

E) Every alternative OWTS subject to this Section shall be subject to inspection by the Department to assure it is operating in a satisfactory manner.

SECTION 6. PROFESSIONAL OF RECORD AND QUALIFIED SERVICE PROVIDER REGISTRATION.

A) Only those individuals who are registered as a PR with the Department may perform percolation tests or other specialized testing as described in the LAMP.

B) Only those individuals who are registered as a QSP with the Department may certify an OWTS as described in the LAMP.

C) Revocation of Registration. PR and QSP registration may be revoked for cause by the Director. Examples of reasons for revocation include but are not limited to the following:

1) Failure to maintain the required professional registrations in good standing.

2) Failure to conduct business in a manner consistent with the ethics of the profession and this Department.

3) Failure to conduct activities in a manner consistent with the LAMP.

4) Failure to pay the required registration fee.

D) Appeal of revoked registration. An appeal for reinstatement of registration may be made in writing to the Director. The appeal must state why the registration should be reinstated and provide facts showing that all reasons for the revocation have been remedied. Upon receipt of the written appeal, the Director shall schedule a hearing with the appellant within 20 working days to review the facts and hear reasons why the registration should be reinstated. At the conclusion of the hearing, or within 10 working days, the Director shall issue a written decision to the appellant.

SECTION 7. FEES.

A) The fees required to obtain an approval under the provisions of this Ordinance shall be as specified in Riverside County Ordinance No. 640. Such fees may be waived in cases where corrective or replacement work is being undertaken to replace property

damaged or destroyed in a disaster recognized in a resolution adopted by the Board of Supervisors.

B) Annual Operating Permit Fees. Prior to the issuance or annual renewal of an operating permit, fees shall be paid as specified in Riverside County Ordinance No. 640.

C) Qualified Service Provider and Professional of Record Registration Fees. Prior to issuance or annual renewal of a QSP or PR, registration fees shall be paid as specified in Riverside County Ordinance No. 640. Registration is non-refundable, non-transferable, and shall expire on December 31st of each year. Any change or lapse in registration shall require the completion of a new QSP or PR registration application and fee.

SECTION 8. OWTS FAILURE.

A) It shall be unlawful for any person to discharge or deposit or cause or permit to be discharged or deposited any sewage, sewage effluent or non-hazardous waste whether treated or untreated in or upon any unincorporated territory of the County of Riverside, including any deposit or discharge of sewage into streams or bodies of water above or below the ground. When sewage is overflowing or being discharged upon the surface of any premises, the Director may order the owner of the premises or occupants thereof who contribute to such overflow or discharge to abate the same forthwith.

B) It shall be unlawful for any person to install or alter plumbing facilities or drainage systems for the discharge or deposit of any sewage, sewage effluent, or non-hazardous waste from any dwelling, house or building or appurtenance thereof in or upon unincorporated territory of the County of Riverside, or into streams or bodies of water above or below the surface where the same is, or may be carried through, or upon,

unincorporated territory of said County, without first securing an approval and permit from the Department.

C) It shall be unlawful for any person to install any structure or paving in the areas identified for OWTS tank access or the primary and expansion dispersal area.

D) In the event an OWTS is determined to be in failure by the Director, an order shall be given to abate the failure.

E) The property owner, agent or occupant shall be given a notice and reasonable time to abate the stated failure. If the OWTS failure is contributing to an immediate hazard or contamination to a public access or body of water, immediate remedy shall be required.

F) If the determination is made that connection to sanitary sewer is an option, the property owner shall be required to connect to sewer within a timeframe as determined by the Director.

G) If a determination of an immediate hazard is made by the Director, which could potentially contaminate a body of water or public area, such as but not limited to sewage effluent flow onto a public roadway, culvert, drainage ditch, dry or active stream or river bed, the property owner, agent and/or occupant must take measures to abate the failure immediately.

H) When reasonable effort to contact the owner, agent, or occupant is unsuccessful, or upon refusal to abate the OWTS failure, the Director may designate it an imminent hazard to health and safety and may abate the failure. Those remedies include, but are not limited to, the Department contracting to pump a septic tank to eliminate discharge; shutting off water to eliminate sewage discharge; providing alternate means of waste disposal, such as portable toilets or other means deemed necessary to abate the nuisance.

Further, the Department may recover the cost for abating the nuisance and its enforcement activities as provided for in Riverside County Ordinance No. 725.

I) The property owner, agent, or occupant may be required to secure a System Certification by a Qualified Service Provider as part of the abatement process.

J) Any and all component failures, deficiencies, or malfunctions identified by the System Certification shall be repaired. Any and all major repairs are subject to the approval process as described in Section 3.

SECTION 9. ENFORCEMENT AND ADDITIONAL REMEDIES, PENALTIES, AND PROCEDURES.

A) It shall be the duty of the Director or his agents to enforce the provisions of this Ordinance.

B) The additional remedies, penalties, and procedures for violations of this Ordinance and for recovery of costs related to enforcement provided for in Riverside County Ordinance No. 725 are incorporated into this section by reference.

SECTION 10. VIOLATIONS.

A) Any person violating any provision of this Ordinance shall be deemed guilty of an infraction or misdemeanor as hereinafter specified. Such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this ordinance is committed, continued or permitted. Any person convicted of a violation of this ordinance shall be: (1) guilty of an infraction offense and punished by a fine not exceeding one hundred dollars ($100.00) for a first violation; (2) guilty of an infraction offense and punished by a fine not exceeding two hundred dollars ($200.00) for a second violation on the same site. The third and any additional violations

on the same site shall be punishable by a fine not exceeding five hundred dollars ($500.00) or six (6) months in jail, or both.

B) Notwithstanding the above, a first offense may be charged and prosecuted as a misdemeanor. Payment of any penalty herein shall not relieve any person from the responsibility for correcting the violation.

SECTION 12. PUBLIC NUISANCE DECLARATION.

In addition, any violation of this Ordinance is hereby declared to be a public nuisance and may be abated by the Director or his duly authorized agent irrespective of any other remedy hereinabove provided.

SECTION 13. SEVERABILITY.

If any provision, clause, sentence, or paragraph of this Ordinance or the application thereof to any person, establishment or circumstances shall be held invalid, such invalidity shall not affect the other provisions or application of the provisions of this ordinance which can be given effect without the invalid provision or application, and to this end, the provisions of this Ordinance are hereby declared to be severable.

SECTION 14. EFFECTIVE DATE.

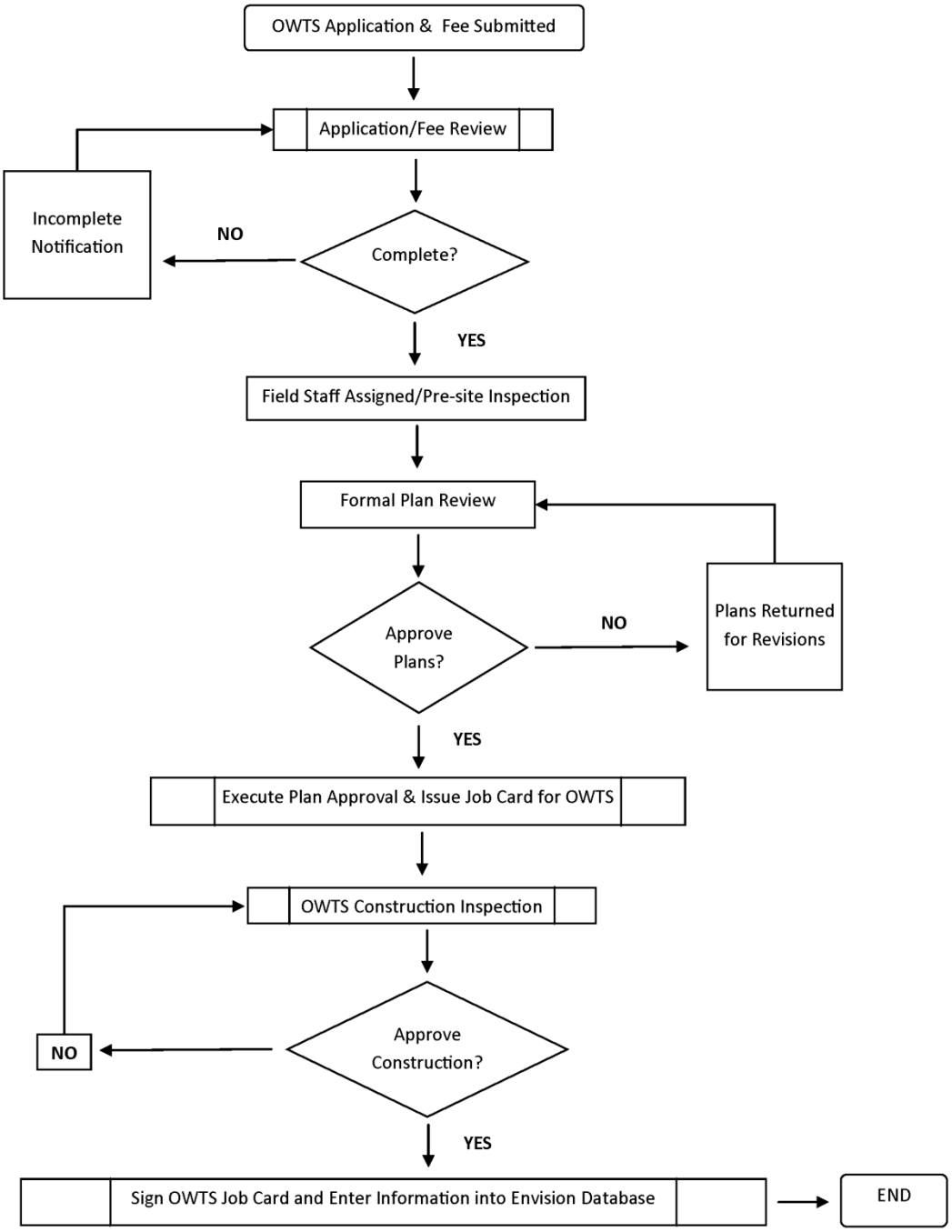
This Ordinance shall take effect 30 days after the date of adoption.

Adopted: 650 Item 9.1 of 02/02/1988 (Eff: 04/03/1988)
Amended: 650.1a Item 3.7 of 06/13/1989 (Eff: 07/13/1989)
650.1 Item 3.11 of 03/28/1989 (Eff: 04/27/1989)
650.2 Item 3.4 of 03/20/1990 (Eff: 04/19/1990)
650.3 Item 3.11 of 06/26/1990 (Eff: 07/26/1990)
650.4 Item 3.1 of 12/07/1993 (Eff: 12/07/1993)
650.5 Item 16.1 of 05/16/2006 (Eff: 06/15/2006)

APPENDIX XI – OWTS APPLICATION AND PERMITTING WORKFLOW DIAGRAM

County of Riverside
DEPARTMENT OF ENVIRONMENTAL HEALTH
www.rivcoeh.org

OWTS Application & Permitting Workflow Diagram



APPENDIX XII – LAND USE APPLICATION

County of Riverside

DEPARTMENT OF ENVIRONMENTAL HEALTH

www.rivcoeh.org

LAND USE APPLICATION

OFFICE USE ONLY

PE CODE:	FEE:

☐ 3880 Lemon Street • Suite 200 • Riverside • CA • 92501 – (951) 955-8980

☐ 47-950 Arabia Street • Suite A • Indio • CA 92201 – (760) 863-7570

EHS #	ON #	LMS #	APN:
TR/PM	LOT #	USE OF PERMIT:	

SECTION A

OWNER:	Name		
	Address	City	Zip
	Phone	Email	
AGENT/ CONTRACTOR:	Company Name	Agent/Contractor	
	Mailing Address	City	Zip
	Phone	Email	
PROPERTY INFO:	Site Address	City	Zip
	Water Agency/Well	Lot Size	
APPLICANT'S SIGNATURE:		**DATE:**	

SECTION B **Below – For Office Use Only**

CHECK BOX IF REQUIRED

If any box is checked, this application shall be considered denied until the information is provided.

☐ Holding Tank Agreements Required	☐ Floor Plan and/or Plumbing Layout Required
☐ Certificate of Existing OWTS Required (C-42)	☐ Special Feasibility Boring Report Required
☐ WQCB Clearance Required	☐ Detailed Contour Plot Plan Required (1 to 5 foot intervals)
☐ Soils Percolation Report Required	

SITE EVALUATION INSPECTION REMARKS:

EHS INITIALS/DATE:

SECTION C

☐ NEW	☐ REPAIR / REPLACEMENT	☐ EXISTING	☐ PUMP	☐ ATU	☐ CONNECT TO SEWER	FIXTURE UNITS #	BDRMS #

Soils Percolation/Boring Report By:		Date:	Project#
C-42 Certification By:		Date:	License#
Septic tank cap.:	Soil Rate:	Tested Depth:	Max. trench depth:
Sq. Ft. Bottom Area:	Total Linear Ft.:	Line(s):	Length:_____ feet - Each 3 feet wide

Sidewall Allowance: _____ Ft. Rock/ _____ Sq. ft. Running foot

Rock below drain line: ____ in. or ☐ Plastic Chambers

Leach Lines/bed special design for slope: ☐ N/A ☐ Overburden Factor:

Pit Diameter:	No. pits:	Depth below Inlet (bi):	Pit Total Depth:	Max. allowable depth:

CONSTRUCTION/INSTALLATION REMARKS:

SECTION D

This Application is ☐ **Approved** ☐ **Denied** regarding the design of the OWTS as indicated on the accompanied plot plan using the requirements set forth in Section C above. **No construction is permitted in the required reserved 100% Expansion area.**

EHS Signature:	Date:

EPO-92 (REV 7/16) Distribution: WHITE – Office File; YELLOW – Bldg. Dept. PINK – Applicant

APPENDIX XIII – FEE SCHEDULE

DEPARTMENT OF ENVIRONMENTAL HEALTH
County of Riverside

INFORMATIONAL BULLETIN NO. 99-14-EPO

COMMONLY USED FEES FOR THE LAND USE & WATER RESOURCES PROGRAM

Back Flow Prevention Certification	
Initial Certification	$ 147.00
Three Year Renewal, Exam & Renewal Of	$ 137.00
Commercial Certification Tester List, Industrial/Commercial	$ 18.00

Water Well Construction	
Private Well Evaluation	$ 425.34
Well Driller Annual Registration	$ 38.00
Initial Monitoring Well	$ 165.24
Additional Monitoring Well For The Same Site *(Only when submitted concurrently with Initial Monitoring Well)*	$ 76.50
Well Abandonment (Destruction of Well)	$ 183.60
Agricultural Permit	$ 186.66
Cathodic Permit	$ 238.68
Community Permit	$ 679.31
Driven Well	$ 59.16
Individual Domestic Permit	$ 503.88
Other Permits	$ 318.24
Permit Transfer Fee	$ 29.58
Extension Of Time For Permit	$ 75.48
Electric to Well Clearance	$ 61.20

Onsite Waste Water Treatment Systems (OWTS)	
New Conventional OWTS	$ 728.28
New OWTS Re-review	$ 48.96
OWTS Site Evaluation (hourly)	$ 180.00
Alt System with Advanced Treatment	$1,020.00
Holding Tank Approval	$ 156.06
Grease Interceptors	$ 229.50
Septic Verification	$ 108.12
Sewer Verification	$ 46.92
Septic Abandonment	$ 275.40
Septic Abandonment with Sewer Connect	$ 322.32
Real Estate Letter/Clearance Letter	$ 90.00

* Note: For a comprehensive list of fees, please contact your local Environmental Health office.
**Document available in an alternate format upon request.
***Disclaimer: Subject to periodic adjustment per Riverside County Ordinance No. 640.

APPENDIX XIV – RIVERSIDE COUNTY INCORPORATED CITIES – OWTS REGULATIONS INFO

REGION 9

Wildomar

Population: 14,064
Median household income: $49,081
City Website: http://www.cityofwildomar.org/
RWQCB: 9
WWTP:

Plan check	OWTS install	Planning review
County	County	County

Temecula

Population: 93,923
Median household income: $71,754
City Website: http://www.cityoftemecula.org/
RWQCB: 9
WWTP:

Plan check	OWTS install	Planning review
County	City Building	County

Murrieta

Population: 103,466
Median household income: $75,102
City Website:
RWQCB: 9
WWTP:

Plan check	OWTS install	Planning review
County	County	County

REGION 8

Lake Elsinore

Population: 40,985
Median household income: $54,595
City Website: http://www.lake-elsinore.org/
RWQCB: 8
WWTP:

Plan check	OWTS install	Planning review
County	County	City Planning

Canyon Lake

Population: 10,939
Median household income: $70,106
City Website: http://www.cityofcanyonlake.com/
RWQCB: 8
WWTP: all sewered

Menifee

Population: 60,000
Median household income: N/A
City Website: http://www.cityofmenifee.us/
RWQCB: 8
WWTP:

Plan check	OWTS install	Planning review
County	County	County

Perris

Population: 47,139
Median household income: $35,338
City Website: http://www.cityofperris.org/
RWQCB: 8
WWTP:

Plan check	OWTS install	Planning review
City Building	City Building	City Planning -contract

Corona

Population: 144,661
Median household income: $72,162
City Website: http://www.discovercorona.com/
RWQCB: 8
WWTP:

Plan check	OWTS install	Planning review
City Building	City Building	City Planning

Eastvale

Population: 55,000
Median household income: N/A
City Website: http://www.eastvaleca.gov/
RWQCB: 8
WWTP:

Plan check	OWTS install	Planning review
County	County	County

Norco

Population: 27,262
Median household income: $62,652
City Website: http://www.norco.ca.us/
RWQCB: 8
WWTP:

Plan check	OWTS install	Planning review
City Building	City Building	City Planning

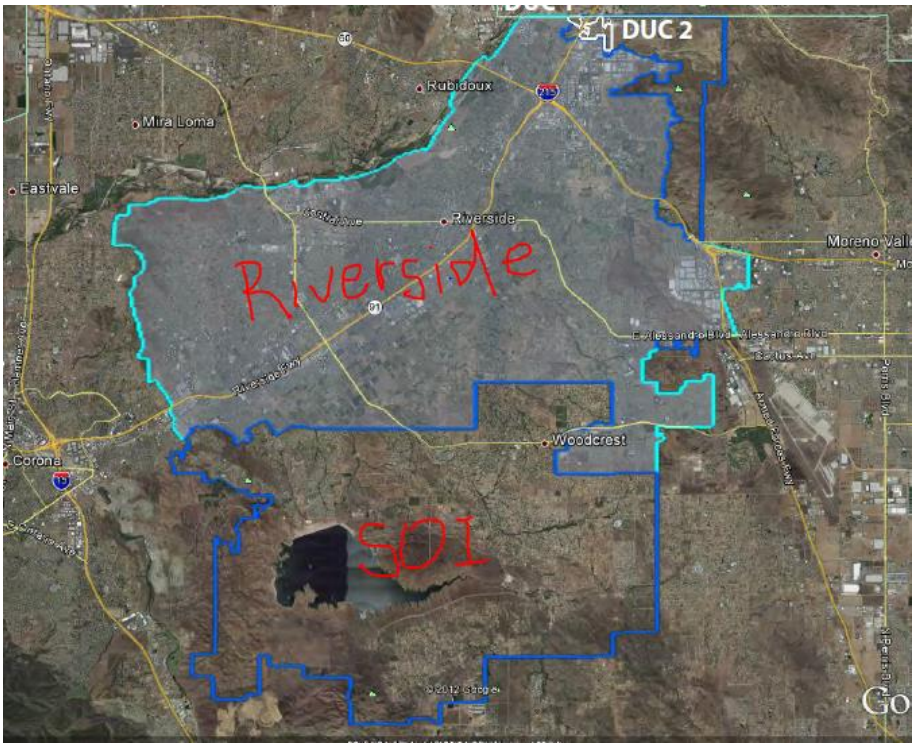
Jurupa Valley

Population: 88,000
Median household income: N/A
City Website: http://www.jurupavalley.org/
RWQCB: 8
WWTP:

Plan check	OWTS install	Planning review
County	County	County

Riverside

Population: 287,820
Median household income: $52,023
City Website: http://www.riversideca.gov/
RWQCB: 8
WWTP:



Plan check	OWTS install	Planning review
County	City	City

Moreno Valley

Population: 174,565
Median household income: $52,426
City Website: http://www.moval.org/index.shtml
RWQCB: 8
WWTP:

Plan check	OWTS install	Planning review
County	city	city

Calimesa

Population: 7,415
Median household income: $47,406
City Website: http://www.cityofcalimesa.net/
RWQCB: 8
WWTP:

Plan check	OWTS install	Planning review
City	City	City

Beaumont

Population: 36,877
Median household income: $67,758
City Website: http://www.ci.beaumont.ca.us/
RWQCB: 8
WWTP:
- Beaumont WWTP No. 1 (NPDES CA0105376), WDID 8 330101001
- Beaumont STP No. 2 (NPDES), WDID 8 330101002

Plan check	OWTS install	Planning review
City	City	City

San Jacinto

Population: 31,066
Median household income: $39,235
City Website: http://www.ci.san-jacinto.ca.us/
RWQCB: 8
WWTP:

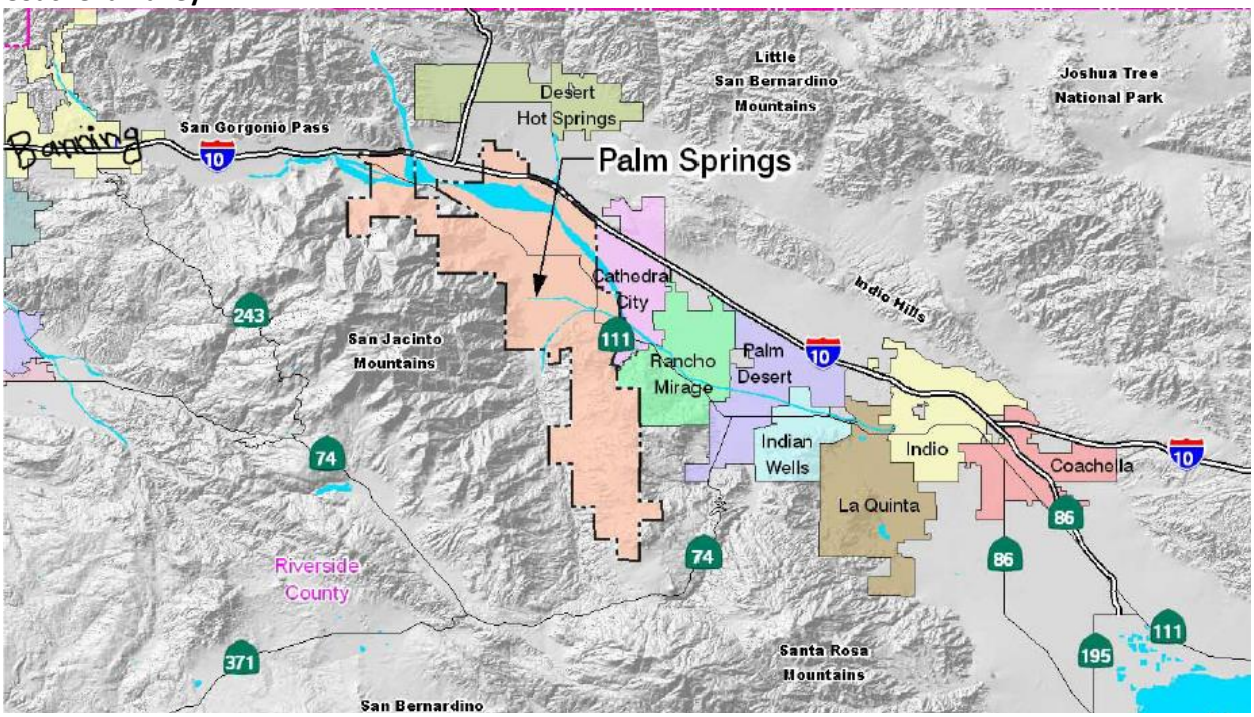
Plan check	OWTS install	Planning review
City	City	City

Hemet

Population: 69,544
Median household income: $31,749
City Website: http://www.cityofhemet.org/
RWQCB: 8
WWTP:

Plan check	OWTS install	Planning review
City	City	City

REGION 7
Coachella Valley



Banning

Population: 28,272
Median household income: $41,268
City Website: http://www.ci.banning.ca.us/
WWTP: Banning WWTP (Non-NPDES), RWQCB-7 BO# 01-022
- provides services to 12,800 dwellings

Plan check	OWTS install	Planning review
City	City	City

Desert Hot Springs

Population: 22,011
Median household income: $33,263
City Website: http://www.cityofdhs.org/
RWQCB: 7
WWTP:
OWTS: DHS Municipal Code 15.20.020 incorporates 2000 Uniform Plumbing Code by reference, with "Administrative Authority" replaced with "Building Official of the City of Desert Hot Springs or his or her designee"

Plan check	OWTS install	Planning review
City	City	City

Palm Springs

Population: 46,437
Median household income: $46,399
City Website: https://www.google.com/#q=city+of+palm+springs

RWQCB: 7
WWTP:
OWTS: PS Municipal Code incorporates by reference RivCo Ord. No. 712 (Liquid Waste)

Plan check	OWTS install	Planning review
*County	City	City

*No formal agreement in place

Cathedral City

Population: 51,081
Median household income: $50,654
City Website: http://www.cathedralcity.gov/
RWQCB: 7
WWTP:

Plan check	OWTS install	Planning review
City	City	City

Rancho Mirage

Population: 16,672
Median household income: $78,434
City Website: http://www.ranchomirageca.gov/
RWQCB: 7
WWTP:

Plan check	OWTS install	Planning review
*County	City	City

*No formal agreement in place

Palm Desert

Population: 49,539
Median household income: $61,789
City Website: http://www.cityofpalmdesert.org/
RWQCB: 7
WWTP:

Plan check	OWTS install	Planning review
*County	City	City

*No formal agreement in place

Indian Wells

Population: 4,865
Median household income: $120, 074
City Website: http://www.cityofindianwells.org/
RWQCB: 7
WWTP:

Plan check	OWTS install	Planning review
*County	City	City

*No formal agreement in place

La Quinta

Population: 38,340
Median household income: $71,127
City Website: http://www.la-quinta.org/
RWQCB: 7
WWTP:

Plan check	OWTS install	Planning review
*County	City	City

*No formal agreement in place

Indio

Population: 71,654
Median household income: $45,143
City Website: http://www.indio.org/
RWQCB: 7
WWTP:

Plan check	OWTS install	Planning review
*County	City	City

*No formal agreement in place

Coachella

Population: 35,207
Median household income: $33,402
City Website: http://www.coachella.org/
RWQCB: 7
WWTP:

Plan check	OWTS install	Planning review
City	City	City

Blythe

Population: 22,178
Median household income: $45,302
City Website: http://www.cityofblythe.ca.gov/
RWQCB: 7
WWTP:

Plan check	OWTS install	Planning review
*County	City	City

*No formal agreement in place

None of the cities listed has secured a formal agreement with the County to implement its LAMP. It was the County's intent to pursue contracts with the cities once it had an approved LAMP. ANY SERVICES NOT IDENTIFIED IN THE LAMP FOR THE INCORPORATED CONTRACTED CITIES REGARDING OVERSIGHT OF NEW AND EXISTING OWTS ARE NOT WITHIN THE SCOPE OF THE LAMP AND WILL BE THE CITIES' RESPONSIBILITIES.

APPENDIX XV – ORGANIZATION CHART