



BOARD STANDING COMMITTEE AGENDA

MENDOCINO COUNTY
BOARD OF SUPERVISORS
501 LOW GAP ROAD, ROOM 1010
UKIAH, CA 95482

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First District

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KATHARINE L. ELLIOTT
County Counsel

HEALTH AND HUMAN SERVICES COMMITTEE

MONDAY, MAY 9, 2016 • 9:00 A.M. • BOARD OF SUPERVISORS CHAMBERS

COMMITTEE MEMBERS: SUPERVISORS JOHN McCOWEN AND TOM WOODHOUSE

ORDER OF AGENDA



- (1) **INFORMATIONAL PRESENTATION AND POSSIBLE DIRECTION REGARDING THE MENDOCINO COUNTY LOCAL AREA MANAGEMENT PLAN (LAMP)**
(Referred from the April 5, 2016, Board of Supervisors meeting)
- (2) **REPORT FROM HEALTH AND HUMAN SERVICES AGENCY REGARDING CURRENT MENTAL HEALTH CONTRACTS AND SUBCONTRACTS**
(Referred from the February 9, 2016, Board of Supervisors meeting)
- (3) **OTHER BUSINESS:**
 - a. Public Expression
 - b. Announcements/Other Business
 - c. Matters from Staff
 - d. Adjournment

AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANCE

The Board Standing Committees comply with ADA requirements and upon request, will attempt to reasonably accommodate individuals with disabilities by making meeting material available in appropriate alternative formats (pursuant to Government Code Section 54953.2). Anyone requiring reasonable accommodation to participate in the meeting should contact the Clerk of the Board's Office by calling (707) 463-4221 at least five days prior to the meeting.

PUBLIC EXPRESSION: (PUBLIC COMMENT FOR ITEMS NOT ON THE AGENDA)

- Members of the public are welcome to address the Committee on items not listed on the agenda and within the jurisdiction of the Committee. The Committee is prohibited by law from taking action on matters not on the agenda, but may ask questions to clarify the speaker's comment and/or briefly answer questions. The Committee limits testimony on matters not on the agenda to 3 minutes per person and not more than 10 minutes for a particular subject at the discretion of the Chair of the Committee.
- Individuals wishing to address the Committee under Public Expression are welcome to do so. If you wish to submit written comments, please provide information to the Clerk of the Board staff, located in the Administration Center, Room 1010.



**MENDOCINO COUNTY BOARD OF SUPERVISORS
STANDING COMMITTEE AGENDA SUMMARY**

AGENDA ITEM #1

- Agenda Summaries must be submitted no later than *noon* Thursday, 10 days prior to the meeting date (along with electronic submittals)
- Send 1 complete original single-sided set and 1 photocopy set
- Transmittal of electronic Agenda Summaries, records, and supporting documentation must be emailed to: cob@co.mendocino.ca.us
- Electronic Transmission Checklist: Agenda Summary Supp. Doc. If applicable, list other online information below

TO: Health and Human Services Committee **DATE:** May 4, 2016

FROM: Health and Human Services Agency **MEETING DATE:** May 9, 2016

DEPARTMENT RESOURCE/CONTACT: David Jensen **PHONE:** 234-6636 Present On Call
CEO RESOURCE/CONTACT: Sarah Dukett **PHONE:** 463-4441 Present On Call

Time Allocated for Item: 45 min.

■ AGENDA TITLE: Informational Presentation and Possible Direction Regarding the Mendocino County Local Area Management Plan (LAMP)

■ PREVIOUS BOARD/BOARD COMMITTEE ACTIONS: Referral was made to Health and Human Services Committee by the Board of Supervisors on April 5, 2016.

■ SUMMARY OF REFERRAL: Health and Human Services Agency Environmental Health staff will provide an informational presentation on mandates set forth in the State Onsite Waste Treatment System (OWTS) Policy referred to in AB 885. The State OWTS Policy allows counties to propose alternate policy known as a Local Area Management Plan, or LAMP. The Draft Mendocino County Local Agency Management Plan proposes alternate criteria for the design, siting, operation, and maintenance of OWTS. The Draft LAMP is based upon existing practices and policies which will achieve compliance with the law while maintaining public health and protecting the waters of the State. The Draft LAMP has been developed with the assistance and advice of public and county stakeholders. The State began implementation of the new OWTS Policy in 2013, and counties proposing alternate policy must submit a draft LAMP to the Regional Water Board by May 2016. It is the intention of Environmental Health to submit the Draft Mendocino County LAMP to the North Coast Region Water Quality Control Board as required.

■ SUPPLEMENTAL INFORMATION AVAILABLE ONLINE AT:

■ ADDITIONAL INFORMATION ON FILE WITH THE CLERK OF THE BOARD (CHECKED BY COB IF APPLICABLE):

FISCAL IMPACT:			
Source of Funding	Current F/Y Cost	Annual Recurring Cost	Budgeted in Current F/Y
N/A	N/A	N/A	Yes <input type="checkbox"/> No <input type="checkbox"/>

■ SUPERVISORIAL DISTRICT: 1 2 3 4 5 All

■ RECOMMENDATION: Receive the presentation and provide direction regarding the Mendocino County Local Area Management Plan (LAMP).

■ CEO REVIEW (NAME): Alan D. Flora, Assistant CEO

PHONE: 463-4441

COMMITTEE ACTION Yes No

ACTION: _____

MENDOCINO COUNTY
ENVIRONMENTAL HEALTH
LAMP DEVELOPMENT

LOCAL AGENCY
MANAGEMENT PLAN

BACKGROUND ON AB 885

- **2000 - Governor Gray Davis signed into law Assembly Bill 885**
 - Required the State Water Quality Control Board (SWQCB) to adopt standards & regulations for permitting Onsite Waste Water Treatment Systems (OWTS)
- **2012 - The SWQCB adopted a policy that implements tiers of requirements for siting, design, operations, and maintenance of OWTS based on potential threats to water quality**
 - This policy is so restrictive that only a small fraction of properties in Mendocino County could qualify for an OWTS

LAMP OUTREACH

- Over the past 2 years EH has participated in regularly joint meetings between Mendocino County, Sonoma County, Humboldt County, and the NCRWQCB focused on LAMP development
- EH has held semi-annual Stakeholder meetings with local designers and contractors to discuss areas of improvement.
- EH held three Public Meetings in Ukiah, Willits, and Fort Bragg in 2015 to educate and discuss the proposed LAMP with the regulated community

LAMP SCOPE OF WORK

- Mendocino County LAMP speak specifically to sub-surface waste disposal
- The State Water Quality Control Board maintains jurisdiction over all surface application designs
- The County currently has no jurisdiction over:
 - Facilities receiving high strength waste (wineries, dairies, distilleries)
 - Large mobile home parks with onsite sewage disposal
 - Sewage treatment ponds
 - Sewer treatment facilities
 - Wetlands disposal systems
 - Land application of treated sewage sludge

BACKGROUND ON AB 885

- Tier 0 - All existing systems that are working properly
- Tier 1 - State design criteria for all new systems proposed
- Tier 2 - Mendocino County LAMP alternative design criteria
- Tier 3 - Systems that have failed and must be repaired
- Tier 4 - New or repair systems within impaired waterways
 - In Mendocino County the Russian River watershed has been identified as an impaired waterway

MENDOCINO COUNTY LAMP

- Tier 2 allows the County to propose alternate design criteria from those in Tier 1 provided the County can demonstrate that they are equally as protective as the standards required by the State
 - Mendocino County is fortunate that it has maintained a high level of protection of ground water and will not need to reinvent the existing policies
- The County's objective is to develop a LAMP that is based upon existing policies and practices that will achieve compliance with the law and not place undue expense and difficulties on the citizens of the County
 - The Mendocino County LAMP is a consolidation of the practices and policies that have been in place for several years. No new regulations are being imposed on the public as a result of the Mendocino County LAMP

LAMP IMPROVEMENTS

- **The Mendocino County LAMP proposes changes that will ease the burden on homebuilders and developers**
 - **The Wet Weather Testing Protocol has been updated to address the current drought conditions**
 - **The LAMP addresses inefficiencies in the current repair policy**
 - **Proposed to increase the County's authorization to issue permits from 10 bedrooms maximum to approximately 65 bedrooms**
 - **Increasing the County's authority has the potential to improve the County's ability to comply with State mandated Low-Income Housing requirements**
 - **Will enable the County to permit both farmworker housing as well as multi-unit dwelling quickly and cost efficiently**

NEW STATE REPORTING REQUIREMENTS

- DEH must submit an annual report the following items to the RWQCB:
 - Variances
 - Septic Failures
 - Septic Repairs
 - Septic Complaints
 - Ground Water Data
- DEH must conduct an audit of the program every 5 years and submit the report to the RWQCB

IMPAIRED WATERWAYS

- The Water Board is currently developing an action plan for the Russian River watershed. They have a draft Russian River TMDL
- In Mendocino County the Water Board has identified several Low Priority Area communities:
 - Talmage
 - Redwood Valley
 - Sites within 600 ft. of main stream Russian River, Commisky Creek, Dry Creek, Feliz Creek, Forsyth Creek, Pieta Creek, Mill Creek, York Creek

POLICY REVIEW & ADOPTION

- The effective date of AB 885 was May 13, 2013
- The local agencies must present their draft LAMP to the RWQCB for review and approval
- County Code will need to be revised with new LAMP tiers upon final approval of the LAMP by the Board of Supervisors and the RWQCB
- The Regional Water Board has until May 13, 2017 to review and approve the County LAMP
- The County will have until May 13, 2018 to adopt the revised LAMP and update applicable county code sections

LAMP SCOPE OF WORK

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 - Land application of treated sewage sludge

QUESTIONS & DISCUSSION



Mendocino County Health & Human Services Agency

Healthy People, Healthy Communities



Dave Jensen, Environmental Health Director

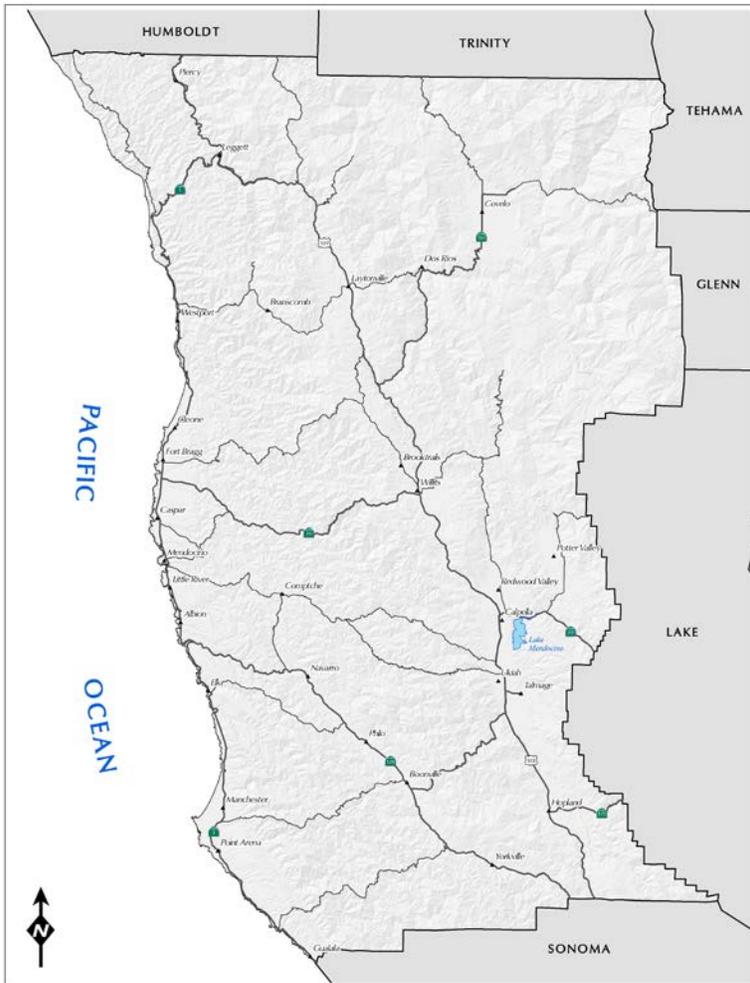
INTRODUCTION

This document represents the Local Agency Management Program (LAMP) relating to the Onsite Wastewater Treatment Systems (OWTS) within the County of Mendocino, California. This LAMP has been prepared in accordance with the requirements of the State Water Resources Control Board (SWRCB) Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems dated June 19, 2012. This policy describes tiers of OWTS management. Tier 2 describes the requirements for developing a LAMP which will become the standard by which authorized local agencies regulate OWTS. An approved LAMP is equivalent to a “Conditional Waiver of Waste Discharge Requirement” for OWTS within the local agency jurisdiction. This LAMP under Tier 2 provides an alternative method from Tier 1

programs while maintaining an equal level of protection of water quality and public health.

GEOGRAPHICAL AREA

Mendocino County is located to the south of Humboldt County and to the north of Sonoma County. It also shares boundaries with Lake County. The county encompasses 3,506 square miles of land, 372 square miles of water, with a population of approximately 87,869. Point Arena, Fort Bragg, Willits and Ukiah are the four incorporated cities within Mendocino County. The City of Ukiah is the county seat as well as the largest of the cities.



Mendocino County is rugged, mountainous, and sparsely populated. The area is divided into inland and coastal valleys, separated by coastal ranges. The county is entirely within the North Coastal Basin and the North Coast Hydrologic Region of the State.

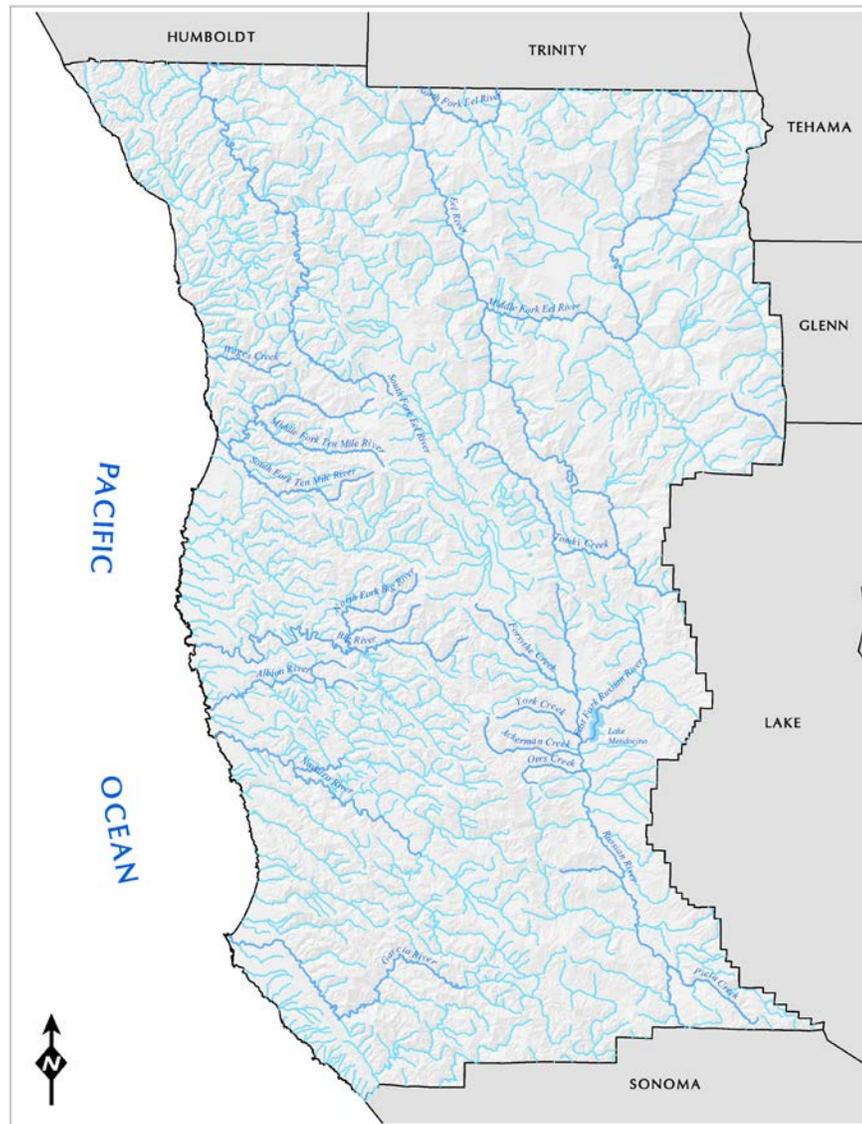
The topography, with tree-covered slopes and intermountain valleys, is not easily served by conventional on-site sewage technology. The lowest point in the basin, three hundred fifty (350) feet, is at the exit of the Russian and Eel Rivers. The highest point in the basin is Black Butte, located in Trinity County, which has an elevation of five thousand nine hundred twenty-two (5,922) feet. The isolation and limited density of development in many of

Mendocino County's rural area makes sizing and installation of on-site sewage systems difficult.

Most of the County consists of rugged, forested coastal mountains dissected by four major river systems: Eel, Russian, Navarro, Gualala rivers and numerous smaller river systems. Soils are generally unstable and erodible, and rainfall is high. The area along the eastern boundary of the County is mostly National Forest land

administered by the United States Forest Service.

The climate of Mendocino County varies from the coast to the interior. The inland area has warm, dry summers and cool wet winter. The Pacific Ocean moderates the temperatures on the coast. From October through April, ninety (90%) to ninety-five percent (95%) of the total annual precipitation in the area falls. Mean totals are as much as sixty (60) inches at the Russian River drainage, with forty-five (45) to seventy (70) inches at the Eel River drainage. Total are lowest in the southern valleys and highest in the northern mountains. Climate thus limits the time of year in which on-site sewage systems can be installed. It also necessitates percolation testing of expansive clay soils during the wet weather season to ascertain performance of proposed on-site sewage systems.



Groundwater is the principal source of domestic water supply. Groundwater basins have been identified by DWR: Ten Mile River, Branscomb Town Area, Little Valley, Fort Bragg Terrace Area, Big River Valley, Navarro River Valley, Anderson Valley, Laytonville Valley, Sherwood Valley, Round Valley, Gualala River Valley, and Annapolis Ohlson Ranch Formation Highlands.

Surface water storage in the Russian River hydrologic unit includes Lake Mendocino, which stores imported Eel River water and East Fork Russian River water. Lake Mendocino is formed by Coyote Dam and has a maximum storage capacity of 122,500 acre-feet with 70,000 acre-feet allocated to water supply. Coyote Dam at Lake Mendocino supports two power generation units with a combined capacity of 3.5 megawatts. The only major surface water development in the Eel River hydrologic unit is Lake Pillsbury, which is formed by Scott Dam, with a storage capacity of 80,700 acre-feet. This facility, in conjunction with Van Arsdale Dam and the Potter Valley Tunnel, provides for power and export of Eel River water to the Russian River unit. The City of Willits obtains its water supply from the 723 acre-foot capacity Morris Reservoir and the 635 acre-foot capacity Centennial Reservoir, both located on James Creek.

REGULATION OF OWTS & PUBLIC EDUCATION AND OUTREACH

The Mendocino County Health and Human Services Agency Public Health Branch Division of Environmental Health is responsible for regulating the OWTS throughout the unincorporated areas of the County. The Division of Environmental Health also regulates the OWTS within the cities under agreements with each city. The Division of Environmental Health operates its OWTS program under the authority granted by the North Coast Region Water Quality Control Board.

The Mendocino County LAMP includes an education and outreach program to assist homeowners with understanding and maintaining their OWTS. An operations and maintenance manual is required for all alternative systems. These systems shall be inspected by either the County or a qualified service provider as per their maintenance manual. All monitoring and maintenance provided shall be documented and reported to the County on an annual basis. Additionally the County will continue to work closely with the North Coast Region Water Quality Control Board to educate the community about septic systems and the need to protect the surface and groundwater resources of Mendocino County.

This LAMP consists of the Tier 2 policy requirements, an OWTS Manual, and section 16.08 of the Mendocino County Code. This LAMP is intended to meet or exceed the intent of the Tier 1 policy put forth by the State by providing a regulatory framework that protects public health, the environment, and groundwater resources to the greatest practical extent possible.

If at any time Mendocino County wishes to withdraw its approved Tier 2 LAMP the County shall do so upon 60 days written notice. The notice shall specify the reason for withdrawal, the effective date for cessation, and the resumption of permitting of the OWTS under Tiers 1 and Tier 4 only.

**MENDOCINO COUNTY
ONSITE WASTEWATER
TREATMENT SYSTEMS (OWTS)
TECHNICAL STANDARDS**

- PART I SITE EVALUATION, SEPTIC FIELD AND
SEPTIC TANK REQUIREMENTS**
- PART II DESIGN, CONSTRUCTION AND
INSTALLATION OF STANDARD SEWAGE
TREATMENT SYSTEMS**
- PART III DESIGN, CONSTRUCTION AND
INSTALLATION OF NON-STANDARD
WASTE TREATMENT SYSTEMS**

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DRAFT

INTRODUCITON

The North Coast is one of the fastest growing areas of California, with widespread and increasing dependence on on-site systems for sewage treatment and disposal. Due to ever-increasing costs, the ultimate construction of sewerage systems in developing areas can no longer be relied upon as a future solution to sewage disposal needs. More and more, on-site systems must be viewed as permanent means for waste treatment and disposal, capable of functioning properly for the life of the structure(s) served. The preponderance of adverse physical conditions throughout the North Coast Region necessitates careful evaluation of site suitability and design parameters for every on-site wastewater disposal system. These policies set forth county-wide criteria and guidelines to protect water quality and to preclude health hazards and nuisance conditions arising from the subsurface discharge of waste from on-site waste treatment and disposal systems.

On-site waste treatment and disposal systems can be an excellent sanitation device in rural and rural-urban areas. However, in areas where population densities are generally high and the availability of land is limited, on-site systems are not desirable. On-site waste treatment and disposal systems should not be permitted if adequate community sewerage systems are available or feasible.

Water conservation practices may protect present and future beneficial uses and public health, and may prevent nuisance and prolong the effective life of on-site wastewater treatment and disposal systems. However, water conservation practices do not reduce the need to size on-site systems as set forth in this policy.

Soil characteristics play a dominant role in the suitability of a site for subsurface sewage disposal. Increased emphasis on determining and utilizing soils information will improve site suitability evaluations.

The installation of many on-site disposal systems within a given area may result in hydraulic interference between systems and adverse cumulative impacts on the quality of ground and surface waters. Physical solutions or limitations on waste load densities for land developments and other facilities may be necessary to avert such eventualities.

New technologies for on-site waste treatment and disposal continue to evolve. Means should be promoted to allow for timely and orderly consideration of promising alternative methods of waste treatment and disposal. Where alternative methods demonstrate enhanced performance, consideration may be given for utilization of different site criteria.

The following site criteria are considered necessary for the protection of water quality and the prevention of health hazards and nuisance conditions arising from the on-site discharge of wastes from residential and small commercial establishments. Waiver of individual criterion may be made in accordance policy. Systems resulting in large

wastewater loads may require additional criteria will require review by the Regional Water Board on a case by case basis.

PART 1 – SITE EVALUATIONS

- 1.6 Soils Profiles
- 1.7 Soil Testing
- 1.8 Septic Tank Sizing
- 1.9 Sizing Criteria
- 1.10 New Use of Existing Systems

PART 1 – SITE EVALUATION

Site evaluations are necessary for the protection of water quality and the prevention of health hazards and nuisance conditions arising from on-site discharge from residential and small commercial establishments.

TESTING IS REQUIRED FOR A SEPTIC PERMIT

Prior to constructing a house, all parcels must be tested for suitability for installation of an on-site sewage system (septic system). The site evaluation, commonly called the “perc” test is required before a permit can be issued to construct a system.

Check first to see if your property has been tested. If it was created after 1979, the parcel may have been tested already, and the results will be on file with the Environmental Health Division. In this case, a permit can usually be issued without further testing upon submission of a scaled plot plan and required fees; provided the system will be installed in the area originally tested.

QUALIFIED INDIVIDUALS MUST DO THE TESTING

If your parcel has not been tested, you will need to hire a qualified site evaluator to perform the testing on your property. These individuals are Registered Environmental Health Specialists, Civil Engineers, Geologist, or Certified Professional Soil Scientists. A list of local qualified site evaluators is available at the Environmental Health Division. Those individuals with acceptable certification who do not appear on our current list must be approved by the Environmental Health Division in advance and must notify us of the date of the tests.

1.1 SOIL PROFILES

THE SITE EVALUATION PROCEDURE

There are two methods of testing your soil for permeability: laboratory texture analysis and the soil percolation test in the field. The site consultant may choose to do both procedures, if necessary. Regardless of the method of permeability testing, soil inspection pits and detailed descriptions of the soil strata are required and form the basic data for issuance of an on-site sewage system permit.

INSTRUCTIONS FOR SOIL PROFILE REPORTS

1. Soil profiles may only be interpreted by qualified individuals.
2. To perform the soil profile report, excavate two (2) soil profile trenches. One hole is excavated in the proposed initial leach field area, the other in the proposed

reserve area. If the soil profile trenches are dissimilar, additional trenches must be excavated to resolve discrepancies. The trenches are excavated to a depth of 5 (five) feet and gently sloping so ladders are not needed. Then, while observing from the surface of the ground, an additional 3 (three) feet is excavated on one end to eight (8) feet total. This soil can be inspected as it is excavated.

SAFETY REGULATIONS PROHIBIT INDIVIDUALS ENTERING UN-SHORED EXCAVATIONS GREATER THAN 5 (FIVE) FEET IN DEPTH.

3. The smeared soil surface of the soil profile trench is picked off with a sharp instrument in order to expose the characteristics of the natural soil layering.

3.1 Make a preliminary determination of the depth of each soil layer or strata.

3.2 Within each strata or layer make the following determinations:
(See Chapter 3 of the Soil Survey Manual for detailed information on the proper method of soil description)

1. Horizon depth range
2. Background soil color using the Munsel Color Chart
3. Abundance, size and distinctness of mottles
4. Gravel content by volume
5. Soil texture (USDA, Soil Conservation Service Classification)
6. Strength and grade of soil structure
7. Soil consistence for dry, moist and wet regimes
8. Abundance and size of roots
9. Abundance and size of pores
10. Boundary distinctness

3.3 Review and revise preliminary soil strata.

4. The following conditions should also be noted on the report:

4.1 Impermeable layers such as claypans, hardpans, cementation.

4.2 Depth to bedrock, fractured rock, or other parent material.

4.3 Water seepage. If water seepage is encountered, the hole should be left open to observe static water level, record depth to the static level.

5. No soil description is useful unless the exact location is known. Record on a plot plan the locations of soil profile trenches triangulated from permanent landmarks or an identifying property corners.

SOIL INSPECTION PITS

Augured test holes are an acceptable alternative to the soil profile, if the Environmental Health Specialist or Regional Water Quality Control Board determines the following:

- (a) The use of a backhoe is not possible because of steep slope or access problems.
- (b) It is necessary only to verify conditions expected on the basis of a soils survey or prior soils testing, or it is being done in conjunction with geologic investigations.

Where this method is used, a minimum of six (6) augured soil inspection holes are required. Three (3) in the proposed absorption area and an additional three (3) auger holes in the 100% reserve area.

1.2 SOIL TESTING

Texture analysis and/or percolation testing shall be performed as described below.

SOIL TEXTURE ANALYSIS

Samples of each significant soil strata shall be extracted for analysis from each inspection pit in the proposed absorption area or reserve area. A sample shall be provided from a depth of 3 feet below the proposed trench bottom demonstrating adequate soil beneath the absorption field. This soil will be laboratory tested for percentage of silt, sand, and clay content. (*Please refer to **INSTRUCTIONS FOR SOIL PROFILE REPORT** above.*)

PROCEDURES FOR CONDUCTING PERCOLATION TESTS

1. Test holes shall be located in an area that complies with the Environmental Health Division's site criteria. Test holes alongside roads or in areas where leach lines cannot be installed will not be accepted.
2. Dig, or bore a hole 4 to 14 inches in diameter to the depth of the soil strata to be tested. Carefully scarify the sides of the hole to remove smeared soil, exposing a natural soil surface. Remove all loose material from the hole and place a section of perforated pipe in the hole and fill the annular space with fine gravel. Percolation rate adjustment factors for the addition of a gravel pack and/or smaller hole size must be employed to adjust observed results back to the Ryon Standard Percolation Test (12 inch square or 14 inch round hole with no gravel pack.) The observed percolation rate in MPI is multiplied by

the adjustment factor to obtain the adjusted percolation rate.

The adjustment factor (AF) can be calculated as follows: (drainable voids = 35%)

$$AF = d_h^2 \div d_p^2 + 0.35(d_h^2 - d_p^2) \text{ and see table below}$$

TABLE OF TYPICAL VALUES

d_p	d_h	AF
4	6	1.57
4	8	1.95
4	10	2.20
4	12	2.37
3	5	1.71
3	6	1.95
3	8	2.27
3	10	2.45
3	12	2.56

Percolation tests are to be performed at the depth of the proposed trench bottom. If percolation tests are the only measure of permeability being used in the evaluation, then percolation tests may also need to be performed at a depth of 3 feet below the proposed trench bottom demonstrating adequate permeable soil depth beneath trench bottom. These deeper tests can be accomplished in the bottom of a backhoe excavation.

3. In order to approximate soil conditions under saturated conditions, it is necessary to presoak the percolation test hole by repeatedly filling the hole with water over a 24 hour period immediately preceding the test, unless tests are performed during wet weather as defined by the Environmental Health Division.

4. Measurement:

4.1 If water is remaining in the percolation test hole 6 hours after the last addition of presoak water, add or remove water to a depth of six (6) inches. From a fixed reference point measure the drop in water level over a 60 minute period. The drop in this 60 minute period is the percolation rate.

4.2 If no water is remaining in the percolation test hole 6 hours after the last addition of presoak water, add water to a depth of six (6) inches. From a fixed reference point measure the drop in water level hourly for at least four (4) hours, adding water each time to bring the level back up to a depth of six (6) inches. The testing periods must be continued until a stabilized percolation rate (i.e. Three consecutive trial periods with rates within 10% of each other) is reached. Test results are reported in minutes per inch.

4.3 If no water is remaining after the first 60 minutes of the testing described in 4.2

above, add water to a depth of six (6) inches. From a fixed reference point measure the drop in water level at regular intervals of time (e.g., 10, 15, 30 minute intervals), adding water each time to bring the level back up to a depth of six (6) inches. The testing periods must be continued until a stabilized percolation rate (i.e. three consecutive trial periods with rates within 10% of each other) is reached. Test results are reported in minutes per inch.

All test holes must be dry within 24 hours of beginning measurements. Final approval of a site for an individual sewage disposal system depends on several factors, and not solely on a percolation test result. Final determination of the suitability of the particular site will be made by the Environmental Health Division.

*(Please see attached **Percolation Test Data** form located in the Appendices.)*

1.3 SIZING CRITERIA

LEACH FIELD SIZING FOR SINGLE FAMILY HOMES

Total flow rate for single family homes is estimated from the number of bedrooms, not from current occupancy or from the number of bathrooms. Each bedroom will be assumed to generate an average of 150 gallons per day. Minimum sizing is for a one (1) bedroom single family residence.

The leach line lengths are based on (1) the total flow rate of the project, (2) the soil permeability, and (3) the number of square feet of absorption surface per linear foot of trench. Thus a standard two (2) foot wide trench with one (1) foot of gravel below the leach pipe would be credited with one (1) square foot on each side of the trench (2 SF) and the two (2) foot width of the bottom (2 SF) for a total of 4 SF per linear foot of trench.

A typical calculation would appear like this:

Trench = # BRMS x Gal./Day/BRM ÷ Soil Application Rate ÷ Absorption Area per Length

Trench length = 3 BRMS x 150 G/D/BRM ÷ 0.45 G/D/SF ÷ 4 SF/LF

Trench length = 250 LF of standard leach trench

SIZING LIST OF TYPICAL LEACH LINE LENGTH

Zone 1 Linear footage of leach lines for sand to loamy sand.
Application rate of 1.2 gal/SF

NUMBER OF BEDROOMS	TRENCH LENGTH
1	30
2	62
3	95
4	125

Zone 2A Linear footage of leach lines for loamy sand to sandy loam.
Application rate of 0.85 gal/SF

NUMBER OF BEDROOMS	TRENCH LENGTH
1	44
2	88
3	132
4	176

Zone 2B Linear footage of leach lines for sandy loam.
Application rate of 0.65 gal/SF

NUMBER OF BEDROOMS	TRENCH LENGTH
1	58
2	115
3	173
4	230

Zone 2C Linear footage of leach lines for loam to sandy clay loam.
Application rate of 0.45 gal/SF

NUMBER OF BEDROOMS	TRENCH LENGTH
1	83
2	166
3	250
4	333

Zone 3. All zone 3 soils require percolation testing, and may require wet weather testing. Zone 3 soils have high clay content. Dependent on the type of clay and expansion characteristics, a Zone 3 soil may be suitable for an on-site septic system if the percolation results and other site factors are acceptable. An application rate of 0.2 gal/SF may be used for sizing the leach trench length.

Zone 4. Unacceptable for conventional on-site sewage systems. A percolation rate of less than 1 inch per hour is not acceptable for a standard system. Wet weather percolation testing should be considered for installation of an alternative system. A rate of 120 MPI is acceptable for an alternative system, provided other site requirements can be met.

WATER USE AND SEWAGE FLOW ESTIMATES

The following table is to be used when estimating water flow rates. Use of estimates other than these must be submitted with well-documented supporting data.

TYPE OF ESTABLISHMENT	GPD/UNIT
<u>Residential:</u>	
Single Family Dwellings	
–Each bedroom	150/bedroom
Apartments (no laundry)	
–First bedroom	120/bedroom
–All added bedrooms	60/bedroom
Mobile Homes	
–Park	250/space
–Individual	150/bedroom
<u>Temporary Quarters:</u>	
RV Campgrounds	
–Unplumbed sites	50/site
–Plumbed sites	100/site
Motel/Hotel/Inn/Bed & Breakfast and other visitor-serving facilities	
Base Rate	80/room*
Add: kitchenette	20/room
served breakfast (guests)	20/room
other served meals	see food service
laundry	40/room
in-room spa	80/room
outside water use	case-by-case basis

* A room is considered an area used for sleeping (two people per area) (e.g. a bedroom or loft.)

Public Establishments:

Boarding School	75/student
Day School	15/student
Hospital	250/bed
Institutions (other than hospitals)	125/bed
Public Swimming Pools w/ bathhouses pool	30/person, max capacity of

Churches

-Without Kitchen Facilities	5/sanctuary seat
-With Kitchen Facilities	7/sanctuary seat

Food Service:

Full Service, Franchise

-Without bar	2.9/SF of dining area
-With bar	3.4/SF of dining & bar area

Full Service, Non-Franchise

-Without bar	2.1/SF of dining area
-With bar	2.6/SF of dining & bar area

Single Service, Franchise

Single Service, Non-Franchise	2.1/SF of prep area
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Meat Market/Department

1.5/SF of work area

Bakery

1.0/SF of work area

Grocery Store

0.2/SF of display area

Tavern

-Bar area	6.7/linear ft of bar
-Patron area	1.4/SF of patron area

Commercial:

Hair Salon

50/stall

Office

0.15/SF of work area

Retail Store

0.15/SF of display area

Laundry, Self-Service

400/machine

Industrial:

Case-by-Case Basis

1.4 NEW USE OF OLD UNKNOWN EXISTING SYSTEMS

Continued use of an existing unknown system can be made similar to the existing permitted use that has occurred provided no apparent public health or environmental hazards have resulted from such use, per inspection by a qualified site evaluator. If the previous building burned down or was demolished or removed within the last 12 months, this will be considered existing use for purposes of this policy.

Alternately, the property owner may retain a qualified individual to perform the discovery and documentation work to the satisfaction of Environmental Health.

The discovery and documentation shall include as a minimum:

1. The septic tank location, size, material, and general condition.
2. The leach field location and condition, number of trenches and length and depth of each trench shall be determined and shown on a scale site plan drawing. Leach field may be located with either electronic equipment (less impact) and/or by actual excavation. Excavation to determine trench dimensions shall be required.
3. Soil conditions in the area of the leach field shall also be determined by backhoe excavation (or alternately by soil auger boring if labor is provided). Field texture estimates and all other significant characteristics shall be reported on the *Mendocino County Soil Profile Description* form.
4. The EH staff shall analyze the suitability of the existing system dimensions, condition and design for the proposed new use, using the Mendocino County LAMP as the standard. This determination shall be documented to the file using the *Mendocino County Site Evaluation Report Format for On-Site Sewage Systems*, excepting the laboratory analysis.
5. An area sufficient for 100% replacement of the sewage system shall be identified by backhoe excavation (or alternately by soil auger boring if labor is provided) and shown on the scale site plan drawing. Field texture estimates and all other significant characteristics shall be reported on the *Mendocino County Soil Profile Description* form.

If the EH staff analysis determines the existing sewage system is not suitable for the proposed new use then a new system shall be designed per the Mendocino County LAMP. A Site Evaluation Report shall be prepared by a qualified individual and submitted to DEH for review and approval, similar to any other new project on an unimproved parcel.

PART 2 – DESIGN

- 2.1 Report Format
- 2.2 Standard OWTS
- 2.3 Non-Standard OWTS
- 2.4 Waiver Guidelines

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PART 2 – DESIGN

2.1 SEPTIC TANK SIZING

One or two bedrooms:	Minimum 750 gallon, two-compartment tank
Three bedrooms:	Minimum 1000 gallon, two-compartment tank
Four bedrooms:	Minimum 1200 gallon, two-compartment tank
Five bedrooms:	Minimum 1500 gallon, two-compartment tank
Multiple units or shared: project	Tank size to be determined by daily flow rate from project

2.2 STANDARD OWTS

A standard sewage system means a method of on-site sewage treatment which includes a treatment unit and a gravity absorption field.

2.3 NON-STANDARD OWTS

Non-Standard systems are used on sites which may not meet the standard criteria of the site evaluation process. Non-Standard systems have specific advantages which can overcome some site constraints. Installation must be according to the designer's plan and the Non-Standard System Program. On-going monitoring, an Operational Permit and a Recorded Notice on the property deed are required of all Non-Standard systems. Copies of the program are available for copy cost at the Environmental Health Division.

NON-STANDARD SEWAGE SYSTEM INSPECTIONS

It is the policy of the Environmental Health Division to discontinue the routine practice of requiring the designer to inspect and certify the construction of typical residential non-standard sewage systems.

Designers may continue to inspect if they choose but it will no longer be a requirement of Environmental Health forcing such redundant inspections.

Exceptions will occur where, due to the innovative, atypical design or the extended size of the project, Environmental Health may require the designer to inspect the construction and certify that the construction is in compliance with the plans and specifications. In those instances, Environmental Health will contact the designer and discuss the potential need for the designer's involvement. If the decision is that designer's inspections are necessary, then the designer's inspection items and the associated schedule will be required and attached as a condition or requirement of the permit.

OPERATING PERMITS FOR EXISTING SEWAGE SYSTEMS

Intent and Benefit

This policy describes when an operating permit might be required for existing systems with high strength waste flows or large flows greater than 1,500 gpd. The placement of the system within the Operational Permit program for continued monitoring of flows and system performance assures public health protection and may also be a way of allowing facility expansion without the capital expense of additional sewage system construction until it proves necessary.

Background Information

The Mendocino County ordinance regulating on site waste water systems allows DEH to issue an operational permit for all non-standard sewage systems. Those systems with high-strength waste flows or flows greater than 1,500 gpd are considered non-standard sewage systems.

Existing systems such as these are not sought out to be included into the Operational Permit program. However if an expansion of a facility is requested, then the Environmental Health Specialist (EHS) may consider placing an existing sewage system within the Operational Permit program with or without expanding the sewage system.

Statement of Problem

Sewage systems with flows greater than 1500 gpd and/or high strength waste have a greater potential for endangering the environment and public health and therefore are deserving of greater oversight by the Division.

Occasionally an applicant proposing a project makes an argument that it is not necessary to add sewage system capacity to an existing sewage system since the actual flows will not amount to the Divisions per-unit estimates. In some cases the applicant is also proposing flows of increased waste strength above that of domestic sewage for which most systems are designed.

NOTE: High strength waste flows differ from residential strength waste flows in that they:

1. originate from non-residential uses; and,
2. have one or more characteristics listed in Table 4-3 of *Design Manual, Onsite Wastewater Treatment and Disposal Design*, USEPA, October 1980, page 56, that is higher in concentration than listed as typical for residential wastewater.

The project proponent has the responsibility to demonstrate that waste flow strength from non-residential uses is not high strength.

Policy Implementation

In these instances staff will consider offering the applicant the option of participating in the Operating Permit program with the commensurate monitoring inspections instead of adding sewage system capacity to meet the estimated needs of the proposed project.

System modifications will need to be made if the system is not already equipped, such as inspection risers at ends of trenches and water or effluent meters, so that the system can be monitored.

In some instances the expansion of the sewage system and inclusion in the Operational Permit program may be required by the EHS to assure the protection of the environment and the public health.

An area sized for the estimated flow must be identified and reserved for a replacement sewage system should the existing system experience overloading.

An Environmental Health Specialist Senior in the Land Use Program and/or the Land Use Program Manager must concur with the issuance of the Operational Permit.

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2.4 REPORT FORMAT

After site evaluation testing has been completed, all of the data must be put together into a Site Evaluation Report submitted to the Environmental Health Division for review.

SITE EVALUATION REPORT REVIEW

Every Site Evaluation Report shall be thoroughly reviewed by the EHS for site criteria consistent with the Mendocino County LAMP. Each report's design shall also be analyzed for its appropriateness for the reported site criteria. The system shall be reviewed to determine if it was properly designed according to recognized design guidelines for the particular system type.

A complete Site Evaluation Report includes:

1. Data Summary & Certification Sheet completely filled out.
2. Certification Statement signed and stamped by site evaluator.
3. Vicinity Map is adequate with mileage and landmarks.
4. Plot Plan shows entire property with location of sewage systems, well, proposed, house site, driveway, north arrow and other landmarks.
5. Detailed Site Plan at scale of 1" = 50' or less showing test pit locations, slope, setbacks, north arrow and landmarks.
6. Detailed Profile Descriptions for each test pit with graphic depiction of soil and trench depth.
7. Complete Variance request, if required.
8. Lab Data for primary & replacement areas including texture, density, slake test and % gravel.
9. Perc tests if required by Zone 3 lab tests.
10. Design Calculations for Non-Standard systems.
11. X-sectional and Plan views of system and component details.
12. Pump and Control Panel specifications & pump performance curve.
13. Pump Chamber X-section and float setting elevations.

If these items are present, then the SER can be accepted as COMPLETE.

*(Please see attached **Site Evaluation Report forms** located in the Appendices section.)*

EXPIRATIONS FOR SITE EVALUATION REPORTS

Prior to issuance of the sewage permit, all previously approved* site evaluation reports older than 5 years shall be referred back for a letter of acknowledgement from the qualified Site Evaluator. The evaluator should determine that the design is still the most appropriate for the site given the soil conditions at the site and any changes which may have occurred. The site evaluator may opt to upgrade the overall sewage system design at their discretion. If the site evaluator is no longer available, the Environmental Health Division's staff should conduct a site visit to confirm that site conditions have not changed significantly and that the soil description was accurately reported. In some cases, conditions may make it necessary to request a completely new Site Evaluation Report.

* “Approved” means a letter, completed soils form that indicates soils work approved, a pre-2001 sewage permit that is completely filled out without a signature or initials at the location of the signature box.

When the revised site evaluation report includes substantial changes of the sewage system design or additional soil tests that must be reviewed by Environmental Health a review fee shall be charged. No fee shall be charged for revisions in which only updated construction standards have been added or changed.

Once the letter of acknowledgment or revised Site Evaluation Report is received and approved, Environmental Health will process the permit application.

PLOT PLAN REQUIREMENTS

A scaled plot plan must be submitted with the site evaluation report and show the following:

- a. Slope of terrain.
- b. Location of all soil tests.
- c. Property lines.
- d. Location of all ponds, creeks, wells, springs, drainage ditches, swales, or other water sources within 100 feet of the primary septic system and replacement area.
- e. Cut banks, sharp breaks in slope, or fill areas.
- f. Retaining walls, curtain drains, French drains.
- g. Structures, including primary home, garage, sheds, barns, mobile homes, caretakers' homes, agricultural housing, guest cottages, shops, business buildings, Second Residential Units, Family Care Units, travel trailers, and detached bedrooms.
- h. Attachments to the home, such as concrete patios or decks.
- i. Swimming pools, spas, portable pools, or hot tubs.
- j. Roads, driveways, and parking areas.
- k. Underground water, power, cable, gas, or other utilities.
Easements and Utility lines (right of way, power, sewer, water, gas, etc.)
- k. North Arrow and Scale

On larger parcels, it may be necessary to also submit an overall parcel map showing a detail inset for the area of the scaled plot plan, which includes all of the above items.

ASSESSOR'S PARCEL NUMBER AND COUNTY ADDRESS NEEDED

The site evaluation report must include the Assessor's Parcel Number (APN) and your approved county address. The address can be obtained by calling Building

and Planning Services at (707) 234-6650, and must be provided in order for your site evaluation report to be processed.

SITE INSPECTION OF PROPERTY

An Environmental Health Specialist may make a site inspection of your property prior to issuing your septic system permit. A Vicinity Map with adequate accurate mileage and directions for locating the property must be provided in the Site Evaluation Report.

2.5 VARIANCE GUIDELINES

INTRODUCTION

The County of Mendocino has adopted regulations which implement the policy of the North Coast Regional Water Quality Control Board with respect to on-site waste treatment and disposal practices. The regulations and the policy are designed to protect water quality and preclude health hazards and nuisance conditions arising from the discharge of wastes from individual waste treatment and disposal systems. It is recognized, however, that situations will arise which will justify less stringent requirements. Consequently, provision is made for the issuance of variances of site suitability criteria and site evaluation methods when public health will not be endangered nor water quality impaired as a result.

PROVISIONS

- A. Variances may be granted by the County Health Officer for individual cases or for defined geographical areas.
- B. In evaluating variance situations primary consideration will be given to the prevention of health hazards, nuisances and impairment of beneficial uses of waters of the state.
- C. Variances are not intended to be issued indiscriminately, but rather with careful review and consideration.
- D. Variances will be considered only if no other reasonable alternative exists on the property in question.
- E. The type of discharge situation in question (i.e., land division, commercial facility, existing lot, repair system) shall be a consideration in determining the propriety of granting a variance.
- F. Copies of all approved variance requests will be submitted to the North Coast Regional Water Quality Control Board.

BASES FOR VARIANCES

A. SITE CRITERIA

1. Natural ground slope in all areas to be used for effluent disposal shall not be greater than 30 percent. All soils to be utilized for effluent disposal shall be stable.
2. Ground Slope in excess of specified limits may be permitted if:
 - a. Other standard site criteria are met and a report by a qualified geologist or engineer substantiates that slope stability problems are not likely to result; or
 - b. Other standard site criteria are met and are substantiated by a qualified site evaluator's report considering such factors as: slope stability, soil depth, permeability, and texture, fracture zones, springs and seeps, and, direct experience in similar circumstances.

3. SOIL DEPTH

Soil depth is measured vertically to the point where bedrock, hardpan, impermeable soils or saturated soils are encountered. The minimum soil depth immediately below the leaching trench shall be three feet. Lesser soil depths may be granted only as a waiver or for alternative systems. Soil depth requirements may be waived from three feet to no less than two feet on slopes less than 20% or from five feet to three feet on 20–30% slopes if:

- a. Other standard criteria are met and soils fall within Zone 2 (or Zone 3 with passing wet weather percolation tests) on the Soil Suitability Chart (individual residence only), and
- b. Substantiated by a qualified site evaluator's report considering such factors as: soil depth, permeability, texture, fracture zones, springs and seeps, and, direct experience in similar circumstances; or
- c. Approved under the Alternative Systems Program.

4. DEPTH TO GROUNDWATER

Minimum depth to the anticipated highest level of groundwater below the bottom of the leaching trench shall be determined from Figure 4-1.

- a. Required depths to groundwater in excess of five feet may be waived if an underlying impermeable soil stratum (Zone 4 or a percolation rate of slower than 120 MPI) precludes direct travel of effluent to the water table. (Three feet of soil containing 15% fines (or a percolation rate slower than 5 MPI) or Zone 3 soil would also meet this requirement).
- b. Minimum depth to groundwater may be waived from five feet to no less than

two feet if:

- i. Other standard criteria are met, public water exists and/or private wells are required to have an approved annular seal, density of development in the immediate area is such that groundwater mounding or other cumulative water quality impacts are unlikely, springs and seeps are nowhere apparent near the site in question, direct experience with other installations in similar circumstances indicates no problem, and
- ii. Substantiated by a qualified site evaluator's report considering such factors as soil depth, permeability, texture, fractured rock, springs and seeps, development density, pertinent research findings, and, direct experience in similar circumstances; or
- iii. Approved under the Alternative Systems Program.

5. PERCOLATION RATES

Percolation test results in the effluent disposal area shall not be less than one inch per 60 minutes (60 MPI) for conventional leaching trenches. Percolation rates of less than one inch per 60 minutes (60 MPI) may be granted as a waiver or for alternative systems.

6. SETBACK DISTANCES

Minimum setback distances for various features of individual waste treatment and disposal systems shall be as shown below in Table 4-1.

Waiver of horizontal setback distances may be permitted as follows:

- a. Setback from perennial streams may be reduced from 100 feet to no less than 50 feet, and setback from ephemeral streams may be reduced from 50 feet to no less than 25 feet, if:
 - i. Other standard criteria are met and water quality impairment or health hazards are judged unlikely to occur and
 - ii. Substantiated by a qualified site evaluator's report considering such factors as: soil depth and filtering capabilities, fractured rock, springs and seeps, ground slope, flow characteristics of the stream, pertinent research findings and direct experience in similar circumstances.
- b. Where the 10-year flood level is not established or readily identifiable, setback distances from perennial streams may be measured from the edge of the watercourse during normal winter flow conditions.

- c. Minor variance in setback requirements (up to 10 % may be permitted as a practical consideration without engineering analysis.)
- d. Variance in setback requirements from wells may be permitted to no less than 75 feet if:

All other standard criteria are met and water quality impairment or health hazards are judged unlikely to occur as substantiated by a qualified site evaluator's analysis considering such factors as: soil depth and filtering capabilities, fractured rock, springs and seeps, ground slope, flow characteristics of the stream, pertinent research findings, and direct experience in similar circumstances.

- e. The setback for an intercept drain from a property line may be reduced from 25 feet to no less than 10 feet if:
 - i. Substantiated by a qualified site evaluator's report considering such factors as: soil depth and filtering capabilities, fractured rock, springs and seeps, ground slope, pertinent research findings and experience in similar circumstances and
 - ii. The location of the intercept drain is unlikely to impair water quality or create a health hazard. (The granting of a variance of setback for an intercept drain does not preclude approval of another variance of site criteria).

7. REPLACEMENT AREA

An adequate replacement area equivalent to and separate from the initial effluent disposal area shall be reserved at the time of site approval. The replacement system area shall not be disturbed to the extent that it is no long suitable for wastewater disposal. The replacement system area shall not be used for the following: construction of buildings, parking lots or parking areas, driveways, swimming pools, or any other use that may adversely affect the replacement area.

The specified 100 percent replacement area may be waived in the following circumstances:

- a. Where the use is to be temporary with guaranteed replacement by public sewerage; or
- b. For existing lots, created before adoption of the 1979 Basin Plan requirements (August 16, 1979), under the following requirements:
 - i. Other standard criteria are met and the lot has been thoroughly tested, and
 - ii. 150% of the primary and replacement leach fields are installed as a dual,

alternating system. A dual, alternating system is defined as an effluent disposal system consisting of two complete standard drain fields connected by an accessible diversion valve and intended for alternating use on an annual or semiannual basis.

Note: the required replacement area cannot be waived for Non-Standard systems, lots created after August 16, 1979, commercial developments, second residential units, and land development in excess of three (3) bedrooms per parcel or design wastewater flows greater than 450 gallons per day. Nor shall the allowed reduction exceed 25%.

8. CUMULATIVE EFFECTS – No variances permitted.

B. SITE EVALUATION METHODS

1. General Site Features

2. Soil Profiles

- a. The number of soil profile excavations (or augured test holes) on individual parcels may be reduced where sufficient prior on-site testing has been conducted to establish the nature of soil conditions (i.e., depth and mottling.)
- b. For land divisions the required two profiles per site may be reduced to one if topography, vegetation and other surface features and/or prior experience indicate consistent 2A or 2B soil conditions over large areas.
- c. More than the specified two excavations per site may be required for large systems serving multiple dwelling units, commercial or industrial facilities.

3. Depth to Groundwater

- a. Water well data may be used for estimation of groundwater levels where
 - i. The well(s) are within the same geologic and soil formations as the proposed disposal site;
 - ii. There is no cause to suspect perched groundwater conditions;
- b. Areas for which soil mottling is not an appropriate measure of groundwater levels include, but are not limited to:
 - i. Coastal dunes
 - ii. River alluvium
 - iii. Soils of volcanic origin. (To be specified by geographical area as

time permits)

iv. Sand and loamy sand

4. Percolation Suitability

Determination of the need for wet weather percolation testing on the basis of clay content (Zone 3) may be waived in lieu of the following procedures:

- i. Soil exhibits low shrink–swell potential as substantiated in a qualified site evaluator’s report considering such factors as: soil color, soil structure, soil consistence, bulk density analysis, clay mineralogy, and other pertinent information; and

5. Wet Weather Criteria

The period for wet weather percolation testing may be extended according to yearly rainfall patterns and upon the recommendation of the Health Department.

C. PROCEDURES FOR ISSUANCE OF VARIANCES

The guidelines above shall serve as the bases for granting individual and geographical area variances. For individual cases, the presentation of the specified information or evidence shall be largely the responsibility of the individual applicant. In the case of geographical areas, variance justification may be initiated and conducted by the Health Department or qualified site evaluators. Identification of geographical areas granted variances shall be appended to this document.

For the repair of failing systems, variances of site criteria and evaluation methods may be made by the Health Officer as necessary to eliminate or preclude hazards to public health and water quality. The preceding guidelines shall be followed to the extent practicable to achieve this objective. Variances involving facilities (a) with more than 10,000 GPD or (b) operating under waste discharge requirements adopted by the Regional Board shall be reviewed jointly by the Health Department and the Regional Board.

(Applicant procedures section to be completed by Health Department.)

PART 3 – CONSTRUCTION & INSTALLATION

- 3.1 General Construction Requirements
- 3.2 Permit Process
- 3.3 Compliance With Plans
- 3.4 Greywater Systems

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3.1 PERMIT PROCESS

APPLYING FOR YOUR PERMIT

The Site Evaluation Report must be submitted to the Environmental Health Division in order to obtain a permit. The site evaluator must submit two (2) signed and stamped copies of the site evaluation report with the current review fee as established by the Mendocino County Board of Supervisors. The report must include all tests conducted, including failing soil tests and their location. One area, or two separate areas, large enough for the initial and reserve absorption fields must be acceptable for an on-site sewage system permit in order for a permit to be issued. The report should include a current telephone number and address for the applicant.

The review time by the Environmental Health Division is approximately 5–10 working days. You will be notified by letter whether the soil report is acceptable, or if additional information is required. You may apply for a permit in person or by mail. Do not send any money until you have been notified that your permit is ready. Permit fees will be accepted only for approved Site Evaluations Reports. Please check with the Environmental Health Division for the current permit fee amount as established by the County Board of Supervisors.

You may apply for the permit as an Owner–Builder. If you do so, you will be responsible for Worker's Compensation for any employees whom you hire. Or you can hire a licensed contractor to apply for the permit and install your septic system for you. Beware of unlicensed persons who offer to "rent" you their backhoe, or work for you on an hourly basis. You may still be liable if they are injured while working on your property. Please read the handout, *"Before You Sign Your Sewage System Permit"* for further information, or contact the California State Contractors License Board.

Approval of your site for an on-site sewage system permit does not constitute approval by Building and Planning Services for your project. You are encouraged to seek the services of these departments to ascertain whether your project meets building, planning, or other criteria beyond the control of the Environmental Health Division.

If you do not want to apply for a permit, your site evaluation report will remain on file. Submission of the report is not an indefinite approval of future ability to obtain a permit. Only by applying for the permit and paying the fees can you vest a right to build a sewage system.

PERMIT RENEWAL

Your permit is good for two (2) years from the date of issuance. Permits may be renewed annually upon timely payment of the renewal fee to the Environmental Health Division. There is currently no limitation on the number of times a septic permit can be renewed. No approvals will be granted for systems installed under an expired permit. The renewal is good for one (1) year and must be renewed while still current. It is the responsibility of

the applicant to renew the permit. The Environmental Health Division may not notify you of the need to renew. Once the septic system is installed and approved, no further renewal is necessary.

SEWAGE SYSTEM REPAIR PERMITS

Septic System Repair permits may or may not require soils testing. The Environmental Health Division has the option of issuing a repair permit without soils testing, if the site conditions and other factors indicate that such testing is not necessary. For sites which necessitate soil testing or where the necessary repair design is complex, the property owner may need to hire a qualified site evaluator to test the soil and/or design the repair system.

SEPTIC SYSTEMS INSTALLED WITHOUT PERMITS

Systems installed without permits or the approval of the Environmental Health Division violates Section 16.08 of the Mendocino County Code. The minimum penalty for installation prior to obtaining a permit is payment of an additional inspection fee equal to the permit fee. You may also be subject to legal action, if you install your system without a permit. You may endanger your own health or the health of others, and degrade surface or ground water with an improperly designed, constructed, or installed system. You will be required to hire a site evaluator to conduct soil testing and evaluate the design of the unpermitted system. It is possible the unpermitted system may have to be abandoned and a system conforming to these regulations installed in its place.

OCCUPATION OF LAND WITHOUT AN APPROVED SEWAGE SYSTEM

The Mendocino County Code does not allow someone to occupy land without the installation of an approved sewage system. You can camp on your land for a maximum of 60 days in any six-month period without obtaining a septic permit, but you must not discharge any wastes to the surface of the ground. You may not utilize a chemical toilet, portable toilet, or holding tank in place of an approved septic system for occupancy of a parcel for purposes other than camping.

SECOND RESIDENTIAL UNITS AND OTHER ACCESSORY STRUCTURES

Second Residential Units of any type (and any structures with plumbing) require approval of the Environmental Health Division. Second Residential Units usually require a separate septic system to be installed. Please contact Environmental Health for specific information on requirements for approval of such units. As well as Proof of Water test if public water is not available.

BUILDING PERMITS

Building Permits are cleared through the Environmental Health Division. This clearance may require a site inspection prior to approval. Adding an additional bedroom to an

existing house (with no expansion of the leach field) may be allowed, if we have a permit on file and it is currently operating properly. Additional leach trench may be required if the system is marginally operating.

Construction is not allowed on top of the septic tank, leach lines, or potential reserve area. You should locate your septic system before constructing driveways, sidewalks, and decks because you may damage the system and have unnecessary future expenses, when improvements have to be removed to inspect, pump, or make repairs to your system.

EASEMENT REQUIREMENTS FOR A SEWAGE SYSTEM

All parts of a sewage system must be located on the same legal parcel as the building or structure they serve. The only exception to this is a recorded easement (or Covenants, Conditions, and Restrictions for existing lots) for the exclusive installation and maintenance of the sewage system and future replacement area. This document is binding on all future owners, and a conformed copy must be filed with the Environmental Health Division.

COMMERCIAL UNITS

All commercial projects, including, but not limited to, office buildings, mobile home parks, multiple family residences, restaurants, laundromats, organized camps, etc., must submit a scaled plot plan of the proposed project. The report must indicate the uses of all structures (including plumbing), and show evidence of adequate area for an initial soil absorption area and replacement area. All commercial projects require a site evaluation report to determine the nature and size of the sewage system, based on current North Coast Regional Water Quality Control Board Basin Plan requirements. In addition, sewage systems treating more than 1500 gallons per day may require approval of the Regional Water Quality Control Board and may be required to complete a cumulative impact study, including calculations for groundwater mounding, flow of nitrates, denitrification, deep percolation rates, and background nitrate rates.

MOBILE HOME PARKS

Mobile Home Parks utilizing on-site must obtain approval from the State of California, Department of Housing and Community Development, Division of Codes and Standards.

LAND DIVISIONS AND MINOR SUBDIVISIONS

Land divisions are subject to the procedures outlined in the current edition of our Land Division Regulations, FORM #26.09.

UNIFORM PLUMBING CODE, APPENDIX K

The Uniform Plumbing Code (UPC) Appendix K - "Private Sewage Disposal Systems", as locally amended, is effective in Mendocino County. All construction standards and

materials are based on UPC requirements.

3.2 GENERAL CONSTRUCTION REQUIREMENTS

SETBACK REQUIREMENTS -- See attached drawing: "Required Setbacks".

1. For buildings, foundations, or structures, including porches, steps, breeze-ways, patios, carports, walkways, driveways, and other similar structures or appurtenances, the setback is five (5) feet to the septic tank and eight (8) feet to the leach field. Property line setback is five (5) feet.
2. For wells, whether used for domestic or irrigation purposes, and whether used or unused, the setback is 50 feet from septic tank and 100 feet from a leach field.
3. For streams which run continuously or a major portion of the year, the setback is 100 feet, as measured from the Flood Hazard Zone on a stream where a Federal Emergency Management Agency (FEMA) study has been made.
4. For seasonal/intermittent streams and drains, the setback is 50 feet and is measured from the edge of the watercourse. If the stream has been mapped in a FEMA Flood Hazard Zone study, then the 100 feet setback to the applies whether the stream is considered seasonal, intermittent, or continuously flowing.
5. For ocean, lakes, ponds, reservoirs, springs or spring developments, the setback is 100 feet. For the ocean, the setback is from mean high tide.
6. For cliffs, cut banks, sharp breaks in slope, the setback is 25 feet. If groundwater or soil depth beneath the trench is less than five (5) feet, then a 50 foot setback is required.
7. A sewage system may not be installed on a slope steeper than 30%, unless the site qualifies for a variance.
8. Distribution box setback is five (5) feet from the septic tank.
9. Ground water intercept drains (also known as curtain or French Drains) must be sited no less than 15 feet up gradient and 50 feet laterally from any absorption field, and 25 feet from any property line.
10. A variance of setback requirements may be allowed, if other criteria meet the Mendocino County LAMP, and in the opinion of the Environmental Health Division, the public health is not compromised.

SEPTIC TANK INSTALLATION – See attached Septic Tank drawing

- a. The tank shall be set level and as shallow as possible on undisturbed earth or compacted aggregate.
- b. The house is connected to the large chamber (2/3 of the tank). This is called the inlet or solids side of the tank. The tank should be setback at least 5 feet from the foundation and it could be 50 feet or more from the house, though cleanouts may be needed at that distance.
- c. The center baffle should be properly installed with an approved vent connecting the large chamber to the small chamber.
- d. The tank shall be watertight. All tanks must be engineered and meet adopted Uniform Plumbing Code requirements. This includes poured-in-place, precast, plastic or fiberglass tanks.
- e. The inlet sanitary tee (also called inlet baffle) should be installed and grouted in place. The grout should be free of cracks and adequate to support the pipes and not allow rotation or movement. Application of waterproofing materials over grout joints is recommended. Non-shrink grout or mortar should always be used.
- f. The outlet of the septic tank shall be fitted with an approved outlet filter in lieu of the traditional sanitary tee. *See attached septic tank drawing.*
- g. The excavation for the septic tank shall be clean, free of large rock, and level before placement of tank.
- h. The size of tank shall be verified by manufacturer's stamp on the tank. The tank must be one which meets the Uniform Plumbing Code.
- i. Fiberglass and polyethylene tanks should be installed per the manufacturer's specifications. This usually requires bedding the tank in sand or small aggregate. Check with the Environmental Health Division for approval of the tank manufacturer prior to installation.
- j. It is required that risers be installed over the septic tank access hatches before it is buried. In this way the tank can be easily located in an emergency and for regular pumping maintenance at about a ten (10) year interval depending on family size or use. Such risers must be watertight, bonded to the septic tank, and not allow surface or groundwater to run into the septic tank.

SEWAGE TRANSMISSION LINE FROM STRUCTURE TO SEPTIC TANK

- a. Must be three (3) or four (4) inches in diameter, ABS Schedule 40.
- b. The sewage line should be installed with a pitch (fall) of no less than 1/4 inches per one (1) foot of line. Lines with too little or too much pitch may plug with waste materials.
- c. The sewage line should not be longer than 50 feet. And it is best to avoid bends in the pipe if possible. Any bends in excess of 30 degrees should have a clean-out installed.

EFFLUENT TRANSMISSION LINE FROM SEPTIC TANK TO DISTRIBUTION BOX

- a. Must be two (2), three (3), or four (4) inches in diameter, Schedule 40 ABS, Schedule 40 PVC or SDR 35 PVC. Drain pipe (or similar belled pipe with no-glued or rubber ring-tight joints) may not be used from the tank to the first distribution box.
- b. The effluent transmission line might use the hole which is slightly higher in the box than the outlet hole piping going to the absorption field (approximately two (2) inches.)

DISTRIBUTION BOX INSTALLATION

- a. Distribution boxes should be placed level on undisturbed native soil or embedded in the aggregate of the soil absorption trench.
- b. Concrete or plastic distribution boxes may be used. Plastic boxes **MUST** be installed according to the manufacturers' recommendations.
- c. All the pipes must be grouted securely in the precast holes of the box with non-shrink grout. Extra holes may not be punched out to accommodate more pipes. Use of waterproofing materials on the outside of the grout is recommended. Plastic boxes may have other sealing methods.
- d. Water should be present at the site during time of inspection, so that the distribution of flow can be tested. Equal Distribution is normally used. Other methods of distributing water may be designed by the site evaluator. If these are specified in the site evaluation report or on the permit, they must be used. If there are any questions about distribution, call the Environmental Health Division before you begin construction.

LEACH LINES AND PIPING

- a. Approved pipe materials for use in the sewage system are listed in the current version of the Uniform Plumbing Code, Section Two, Table A.
- b. Gravel is to be installed under the pipe in the amount specified on the permit. Gravel depth of up to two (2) feet can be verified with a gravel rod. For gravel depths greater than two (2) feet, one of the following verifications can be used:
 1. Purchase receipts.
 2. Amount of rock below the pipe should be exposed at the ends of the lines at a 45 degree slope, so the amount of rock can be visibly determined.
 3. Stakes may be embedded in the gravel at 40 foot intervals, so that they may be vertically pulled out to verify the amount of rock under the pipe.
- c. The bottom of the leach trench should be level and approximately uniform in depth. Leach lines must follow land surface contours. The leach pipe should be placed with holes 135 degrees from the crown, and with a fall of no more than one (1) inch per 30 feet. Smear or compacted material must be removed from the side wall below the invert elevation by hand raking to the trench sides to a depth of one (1) inch.
- d. Leach lines should be no longer than 100 feet and equal in length. Distribution can be from the end or the mid-point of the trench. The total length of the leach lines and the amount of gravel required is determined by the number of bedrooms in the home and the results of the soil evaluation.
- e. The minimum lateral separation of undisturbed earth between leach trenches is four (4) feet when using 12 inches of gravel under the pipe. This increases to six (6) feet for 24 inches of gravel, and eight (8) for 36 inches of gravel. On slopes greater than 20%, the leach lines must be installed with a minimum separation of eight (8) feet of undisturbed earth between trenches.
- f. A transit or builder's level should be used to layout and install the septic system. A builder's level should also be available at the site during the final inspection to check fall on the drain pipe.
- g. The trenches are normally 24-36 inches wide, but no wider than 36 inches. Anything wider than 36 inches is considered a seepage bed.
- h. Drain rock used in the lines should be clean (washed), 1 ½ inch nominal size (¾ inches–2 ½ inches), river gravel or approved crushed rock. Smaller sized material, if appropriate, may be specified by the site evaluator. At least 12 inches of drain rock is required under the leach line and two (2) inches over the pipe. Greater depths may be specified by the site evaluator if soil conditions are suitable. No more than 36 inches of rock may be used under the pipe.

- i. Heavy, brown (Kraft) paper, straw, filter fabric or other approved material must be placed over the drain rock prior to soil backfill to prevent infiltration of soil into the washed gravel of the trench. Do not use roofing felt, tar paper, plastic or other non-breathable materials.

INSPECTION RISERS IN ABSORPTION TRENCHES

Inspection risers, constructed of ABS plastic, are required to extend to the bottom of the trench at the end of each leach line and connect to the drain pipe with a Tee fitting. Such wells are necessary to monitor the water level in the trenches. *See the attached Typical Trench drawing.*

DRY WEATHER CONSTRUCTION

Construction of the sewage absorption system should be during dry weather. The rainy season shall be avoided. Work may be performed no earlier than May 1 and no later in the year than November 1 without prior written approval from the Environmental Health Division. Extra work may have to be performed in order to construct in moist soil conditions.

FINISHED CONSTRUCTION DRAWINGS

An "as-built" drawing should be prepared by the installer, if there are any changes from the site evaluator's site plan. No deviations from the site evaluation plan should be made without prior written approval of both the Environmental Health Division and the design consultant.

SPECIAL PUMP SYSTEMS

Pump systems shall be installed according to the site consultant's design. Electrical connections require an electrical permit from the county Building Department, in addition to the septic permit.

NON-STANDARD SYSTEMS

Non-Standard systems require installation by individuals with the appropriate experience, qualifications, and equipment. Check with your site consultant for a recommendation.

JOB SITE PLANS AND SPECIFICATIONS

A copy of the site evaluation report must be on the job site for the installer of the sewage system. The design and plans shall be followed. If there are any problems or if you have a question, you should contact the site evaluator, and the Environmental Health Division before construction begins.

3.4 COMPLIANCE WITH PLANS

System installers who do not comply with the plans and specifications shall be delivered a Legal Notice to correct the violation by the inspecting Environmental Health Officer. The system shall not be approved and a hold shall be placed on the occupancy of the residence or structure under construction until such time as the installer has made the correction.

Failure to make the necessary corrections within a reasonable amount of time shall result in the posting of a Notice of Violation at the installation site and sent by certified mail to the sewage system installer's place of business. A copy of the Notice of Violation shall also be sent to the property owner informing the owner of the violation. Should the sewage system installer fail to make the corrections by the specified date in the Notice of Violation, an Order to Abate shall be issued and sent by certified mail to the sewage system installer's place of business and a referral shall be made to County Counsel to initiate legal action.

Notwithstanding the above, some minor modifications that the sewage system installer may make that shall be considered equivalent are:

- Clean washed leach rock may be river aggregate, or quarried rock, or lava rock
- Distribution box may be concrete or plastic

Some of the equipment specifications that remain under the purview of the qualified professional designer are:

- Secondary treatment process, proprietary manufacturer, & model
- Man-made aggregates or plastic chambers in lieu of leach rock
- Piping size & material
- Septic tank size & material
- Valve box size & material
- Effluent filter type, size & material
- Check valve type, size & material
- Pump manufacturer & model
- Dispersal field layout & configuration

3.5 GRAYWATER SYSTEMS

CALIFORNIA SYSTEM REQUIREMENTS FOR CLOTHES WASHER SYSTEMS

Under the 2010 California Plumbing Code (California Code of Regulations, Title 24, Part 5, Chapter 16A), a Clothes Washer System in a one–or two–family dwelling does not require a permit as long as the installer follows the 12 minimum requirements outlined below:

1. If required*, notification has been provided to the Enforcing Agency regarding the proposed location and installation of graywater irrigation or disposal system.

Note: A city, county, or other local government may, after a public hearing and enactment of an ordinance or resolution, further restrict or prohibit the use of graywater systems.

* Required by Mendocino County Environmental Health Division

2. The design shall allow the user to direct the flow to the irrigation or disposal field or the building sewer. The direction control of the graywater shall be clearly labeled and readily accessible to the user.
3. The installation, change, alteration or repair of the system does not include a potable water connection or a pump and does not affect other building, plumbing, electrical or mechanical components including structural features, egress, fire-life safety, sanitation, potable water supply piping or accessibility.
4. The graywater shall be contained on the site where it is generated.
5. Graywater shall be directed to and contained within an irrigation or disposal field.
6. Ponding or runoff is prohibited and shall be considered a nuisance.
7. Graywater may be released above the ground surface provided at least two (2) inches (51 mm) of mulch, rock, or soil, or a solid shield covers the release point. Other methods which provide equivalent separation are also acceptable.
8. Graywater systems shall be designed to minimize contact with humans and domestic pets.
9. Water used to wash diapers or similarly soiled or infectious garments shall not be used and shall be diverted to the building sewer.
10. Graywater shall not contain hazardous chemicals derived from activities such as

cleaning car parts, washing greasy or oily rags, or disposing of waste solutions from home photo labs or similar hobbyist or home occupational activities.

11. Exemption from construction permit requirements of this code shall not be deemed to grant authorization for any graywater system to be installed in a manner that violates other provisions of this code or any other laws or ordinances of the Enforcing Agency.
12. An operation and maintenance manual shall be provided. The manual is to remain with the building throughout the life of the system and indicate that upon change of ownership or occupancy, the new owner or tenant shall be notified that the structure contains a graywater system.

DRAFT

Mendocino County
Graywater System Guidelines
for Outdoor Irrigation



Community Health Services Branch • Division of Environmental Health
860 N Bush St, Ukiah • (707) 234-6625
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www.co.mendocino.ca.us/hhsa/chs/eh/

Introduction

A Graywater System **cannot replace** a septic system or city sewer connection.

Overview of Guide

Why send your laundry wash water to a sewage treatment plant when you can use it to water plants and trees in your yard instead? Certain types of wastewater are clean enough for outdoor subsurface irrigation. That’s why many Californians use their laundry and shower water to keep their landscapes green, even during times of drought.

The *Mendocino County Graywater System Guidelines for Outdoor Irrigation* is an educational resource for homeowners and professionals who want to install residential graywater systems for subsurface outdoor irrigation. In this guide, you’ll learn about the benefits of graywater, when and where to use it, and when a permit is required.

The guide provides methods for designing and installing a clothes washer system (also known as a laundry-to-landscape system). The methods described in this guide may not be the only procedures for designing and installing systems that meet current requirements. Each homeowner’s circumstances are different; you must ensure that a graywater system on your property is designed and installed safely, is consistent with applicable code requirements, and is operated in a manner that causes no harm or damage to yourself or neighbors. If at any time you have doubts about installing a graywater system, please consult a qualified Site Evaluator or plumber.

What is Graywater?

- Graywater is water from clothes washing machines, showers, bathtubs, and bathroom sinks. It is water that contains some soap but is clean enough to water plants.
- Water from toilets, kitchen sinks, dishwashers and wash water from diapers is not considered graywater in California.
- Graywater is not the same as recycled water, which is highly treated wastewater that is used in applications such as irrigation and toilet flushing.

Benefits of Graywater

Reusing graywater is an important water saving practice. Benefits of using graywater instead of potable water for irrigation include:

- Decreases potable water use by 16 to 40 percent, depending on the site (Cohen 2009).
- Decreases water and wastewater utility bills.

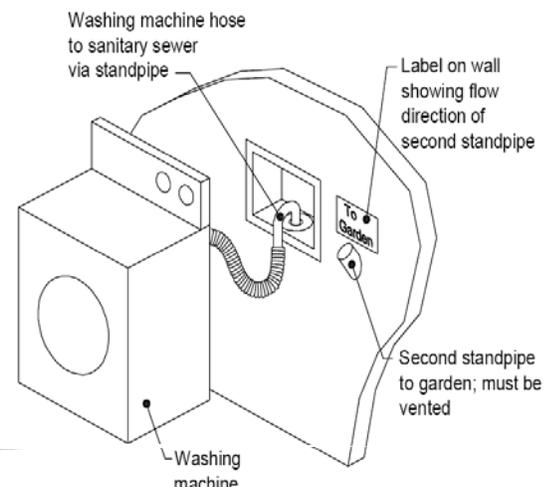


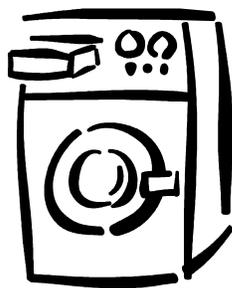
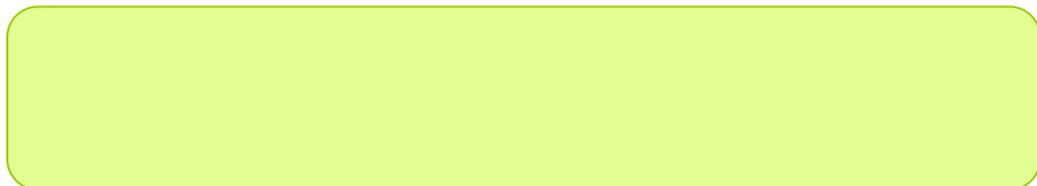
Figure 1: Typical clothes washer system.

- Provides an alternate source of irrigation water while reserving treated potable water for high-quality water needs like drinking and showering.

Graywater Basics

Graywater is a unique source of water and must be used differently from potable water and rainwater. These are some basic guidelines for residential graywater systems:

- **Do not store graywater more than 24 hours.** If you store graywater, the nutrients in it start to break down and create bad odors.
- **Minimize contact with graywater.** Graywater can contain pathogens. All systems should be designed so that water absorbs into the ground and is not accessible to people or animals.
- **Do not use graywater for irrigating food crops** such as root vegetables or edible parts of food crops that touch the soil.
- **Disperse graywater into the ground** and cover irrigation field with at least 2” of mulch, soil, rock or other approved material.
- **Keep your system as simple as possible.** Avoid pumps and filters that need maintenance. Simple systems last longer, require less maintenance, use less energy and cost less.
- **Install a valve at a convenient location** to allow for easy switching between the graywater system and the sewer system.
- **Do not allow water to pond or run off your property.** Ponding graywater can provide opportunities for mosquitoes to breed and human contact. Your graywater system must be located entirely on your property, and cannot runoff to other properties.
- **Match the amount of graywater directed to your plants with their irrigation needs.** You need to know how fast water absorbs into your soil to properly design your system.



Laundry



to



Landscape

Graywater Regulations

Graywater use is legal in California. In August 2009 California's graywater regulations changed, allowing for lower-cost graywater systems to be installed legally, including some without the need for a permit. A permit is not required for *Clothes Washer Systems* (laundry-to-landscape) that meet the conditions listed in the next section, "When a Permit Is Not Required." For information on systems that do require permits, see "When a Permit Is Required." California regulations for residential graywater systems can be found in Chapter 16A of the California Plumbing Code.

When a Permit Is Not Required

You can install a graywater system ***without*** a permit if you meet ***all*** of the following requirements:

- Graywater comes from the washing machine only.
- Graywater system does not alter the household plumbing (graywater is accessed from the hose of the machine, not by cutting into the plumbing).
- Graywater system is for one- or two-family dwelling.
- Graywater system follows 12 guidelines set forth in the California Plumbing Code (see the guidance document titled "California Regulations for Residential Graywater Systems).
- A plot plan of your clothes washer system has been submitted and approved by the Mendocino County Division of Environmental Health.

When a Permit Is Required

You ***need*** a permit from the Mendocino County Division of Environmental Health for a graywater system that includes ***one or more*** of the following conditions:

- Graywater system collects water from showers, sinks, or baths.
- Graywater system alters the plumbing. If you cut into the drainage plumbing to access the graywater, you must obtain a permit from the Building Department.
- Graywater system is installed in a building that is not a one- or two-family dwelling.
- Graywater system includes a pump (other than the washing machine's internal pump) or a tank.

References

California Graywater Code: http://www.hcd.ca.gov/codes/shl/2007CPC_Graywater_Complete_2-2-10.pdf.
Cohen, Yorem, 2009. Graywater—A potential source of water. UCLA Institute for the Environment. Available at <http://www.ioe.ucla.edu/reportcard/article.asp?parentid=4870>.

Developing a Graywater System

Graywater systems can range from very simple to very complex. Follow these steps to create a well-functioning and safe system.

1. **Start with water conservation!** Saving water is the low cost and environmentally friendly place to begin. You may find that your landscape doesn't need the amount of water you've been giving it. There are also easy ways to greatly reduce the amount of water used in your household.
2. **Determine which fixtures in your home are candidates for graywater capture.** Clothes washing machines are the easiest place to begin, and a graywater system using only water from a clothes washer does not require a permit. If your machine is in a room with an exterior wall, it is usually simple to direct a pipe outside. If your machine is in an interior room, you will need to run the pipe outside through a crawl space or basement.
★ Adding other acceptable fixtures to your graywater system such as the shower, bathtub or the bathroom sink will require a permit from Environmental Health.

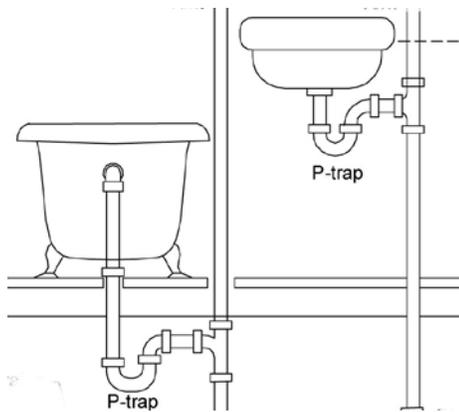


Figure 2: Typical "p-trap" under a bathtub, shower or sink.

Find the shower drain pipe by going under the shower to look for a "p-trap". Run hot water in the shower and feel which pipe heats up. *Make sure you do not tap into the toilet drain!* A plumber can help reroute shower pipes if needed. If your shower is on the second story and the pipes run inside the wall, the drain is probably combined with the toilet drain in the floor, making the shower graywater *inaccessible* without a major remodel.

3. **Decide which type of Graywater System is best for you.** Review Figure 3 on the next page for information on costs and system choices. If you choose to include fixtures other than a clothes washing machine (permit required) contact a qualified Site Evaluator to design your system and skip to #8 on the next page.
4. **Estimate the quantity of graywater produced** by your chosen source(s) using the *Estimating Graywater Flows* section on page 8 of this manual.
5. **Determine your soil type** by conducting a *soil ribbon test* (see pg. 9) and/or sending soils for a laboratory analysis (lab analysis is required if your system needs a permit).
6. **Determine the size of your graywater Irrigation Field** using your estimated graywater flow and soil type

7. **Submit a plot plan to the Mendocino County Environmental Health Division.** Even though a permit is not required for a *Clothes Washer System*, you are still required to submit a plot plan and details about the system to Environmental Health.
8. **Install your system.** Once your plans are reviewed and approved, and a permit is issued by Mendocino County Environmental Health (if applicable), find an installer or install the system yourself.
9. **Remember to label the system** including the 3-way valve and all above-ground graywater pipes.
10. **Operate & Maintain your system.** An Operations & Maintenance manual must stay with the property for the life of the system. See the guidance document titled “Sample Operation & Maintenance Manual.”

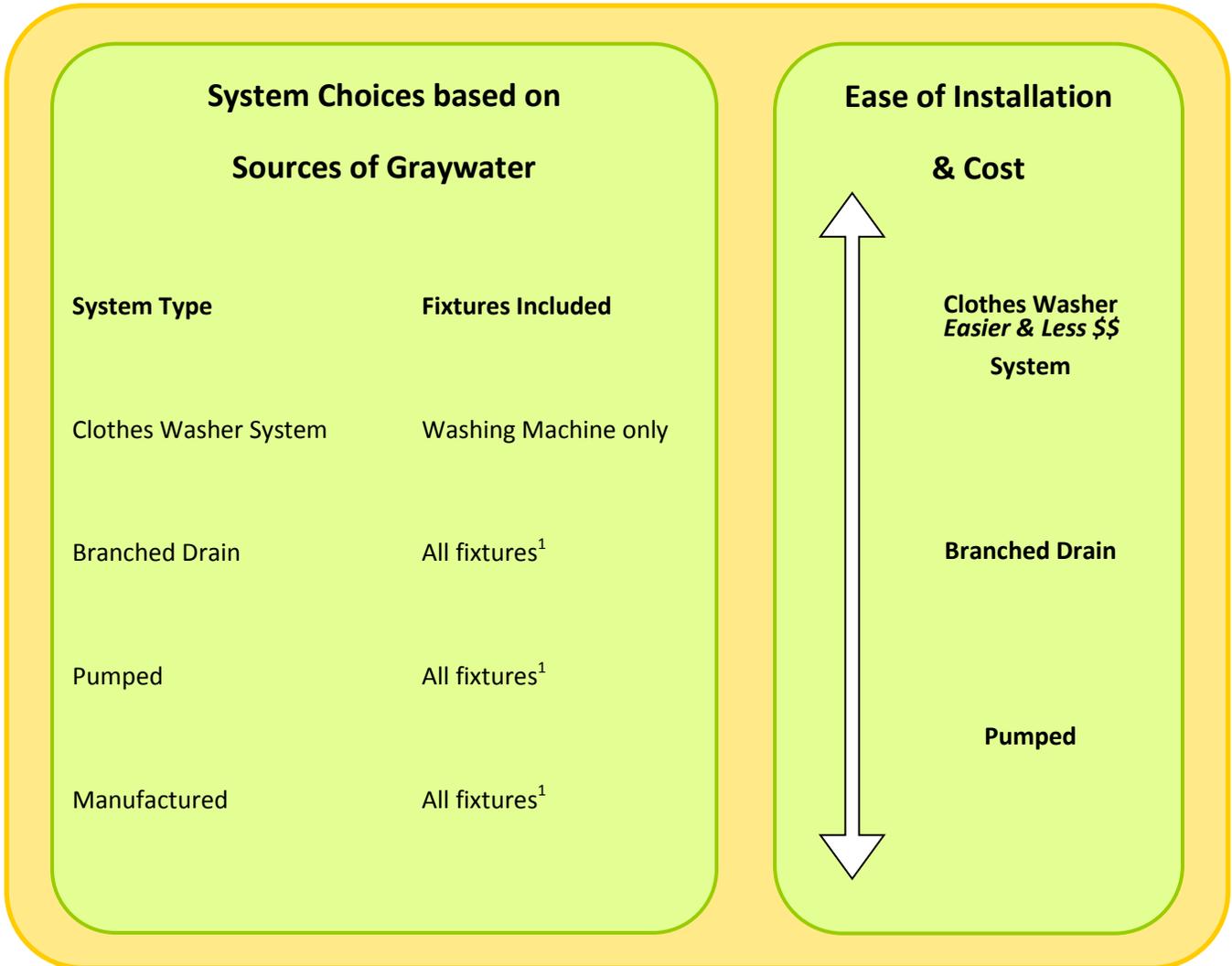


Figure 3: Use the figure above to help decide what type of graywater system you can install and afford.

SIZING Your Graywater System

There are three steps for sizing your graywater system. It is important to follow these steps so that you can design a system that has a properly sized *irrigation field*. Remember, California state law requires that graywater irrigation systems never cause ponding or runoff.

- STEP 1:** ***Estimate your graywater flows.*** When designing your *Clothes Washer System*, there are two different methods for estimating your graywater flows: the California Code Method and the Irrigation Calculation Method. Both methods are explained on the next page. Permitted graywater systems that incorporate fixtures other than your clothes washer are required to use the California Code Method.
- STEP 2:** ***Estimate the soil absorption capacity of your soils*** using a laboratory analysis (required for permitted systems) or a *soil ribbon test* explained on page 9.
- STEP 3:** ***Calculate the size of your irrigation field.*** Use your estimated graywater flows from Step 1 and your soil absorption calculations from Step 2 to determine the necessary size of your irrigation field (see page 10).
- STEP 4:** ***Record findings of Steps 1 to 3*** in the Operations & Maintenance Manual for your system. Be sure to show your calculations when recording your findings.

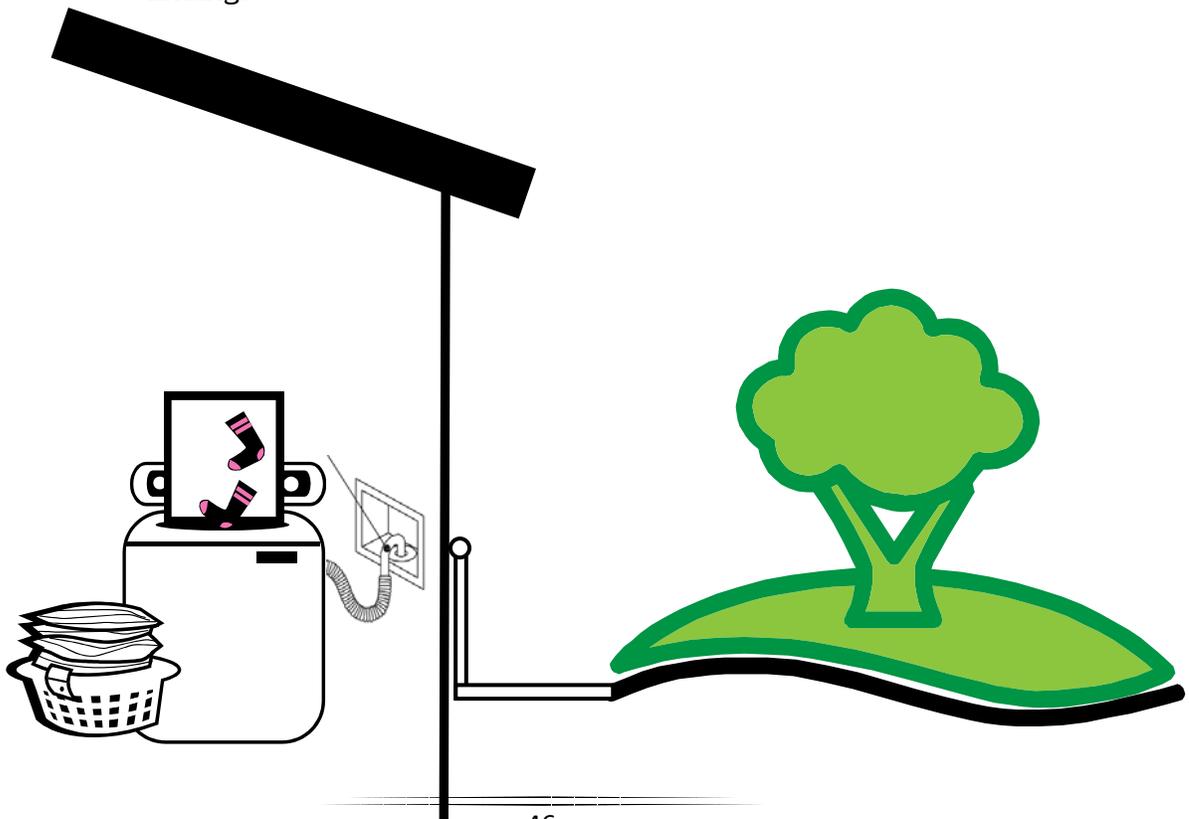


Figure 4: Clothes Washer System leading from washing machine to mulch basin.

Sizing your Graywater System

STEP 1: Estimate your Graywater Flows

California Code Method

(Based on CCR Title 24, Part 5, Chapter 16A)

For the CA Code Method, calculate the number of occupants using the following calculation, not the number of people actually living in your home.

Number of Occupants:

2 occupants in the First Bedroom

1 occupant in Each Additional Bedroom

Graywater flow per occupant:

15 gallons per day per occupant (gpd/occupant) for a washing machine

Total Estimated Graywater Flow:

Number of Occupants x Graywater flow per occupant = Total Estimated Graywater Flow

Example: 3 Bedroom Home

Number of Occupants = **4**

Graywater flow per occupant = **15** gpd/occupant

Total Estimated Graywater Flow = **4** occupants x **15**gpd/occupant = **60 gpd**

Irrigation Calculation Method

Irrigation calculations are important to make for all systems as they help ensure your plants will not get over or under-watered. This method can be used in place of the CA Code Method above for Clothes Washer Systems only.

Washing Machine (weekly flow)

20 gallons/load* x 3 loads per week = **60 gallons per week**

Washing Machine (daily flow)

20 gallons/load* x 3 load(s) per day = **60 gallons per day**

*See your machine specifications to determine how many gallons are used per load. The numbers used here are for example only.

Performing these calculations for your specific household fixtures yields the most accurate estimate of the amount of graywater available for your plants, but does not consider future changes. Volumes can vary if the size or habits of your household change over time, or if a new

Irrigation during Vacation

Going on a trip? Most graywater systems only irrigate when you are home using the laundry or other fixtures. If you go on vacation, make plans to keep your plants watered and healthy!

owner moves in. If you sometimes do five loads of laundry in one day, rather than spread them out over the week, consider this when you design and operate your system.

Sizing your Graywater System

STEP 2: Estimating the Absorption Capacity of Your Soils

Understanding the ability of your soil to absorb water is critical for designing your graywater system and sizing your landscape *irrigation field*. The irrigation field must be sized to allow the graywater to soak into the soil without ponding or runoff.

Different types of soil absorb water at different rates. Sandy soils absorb water more quickly than clay soils. To learn the basics about the soils in your yard, conduct a simple *soil ribbon test* by following the flow chart below.

Soil Ribbon Test



Figure 5. Prepare soil for the ribbon test by moistening and kneading.

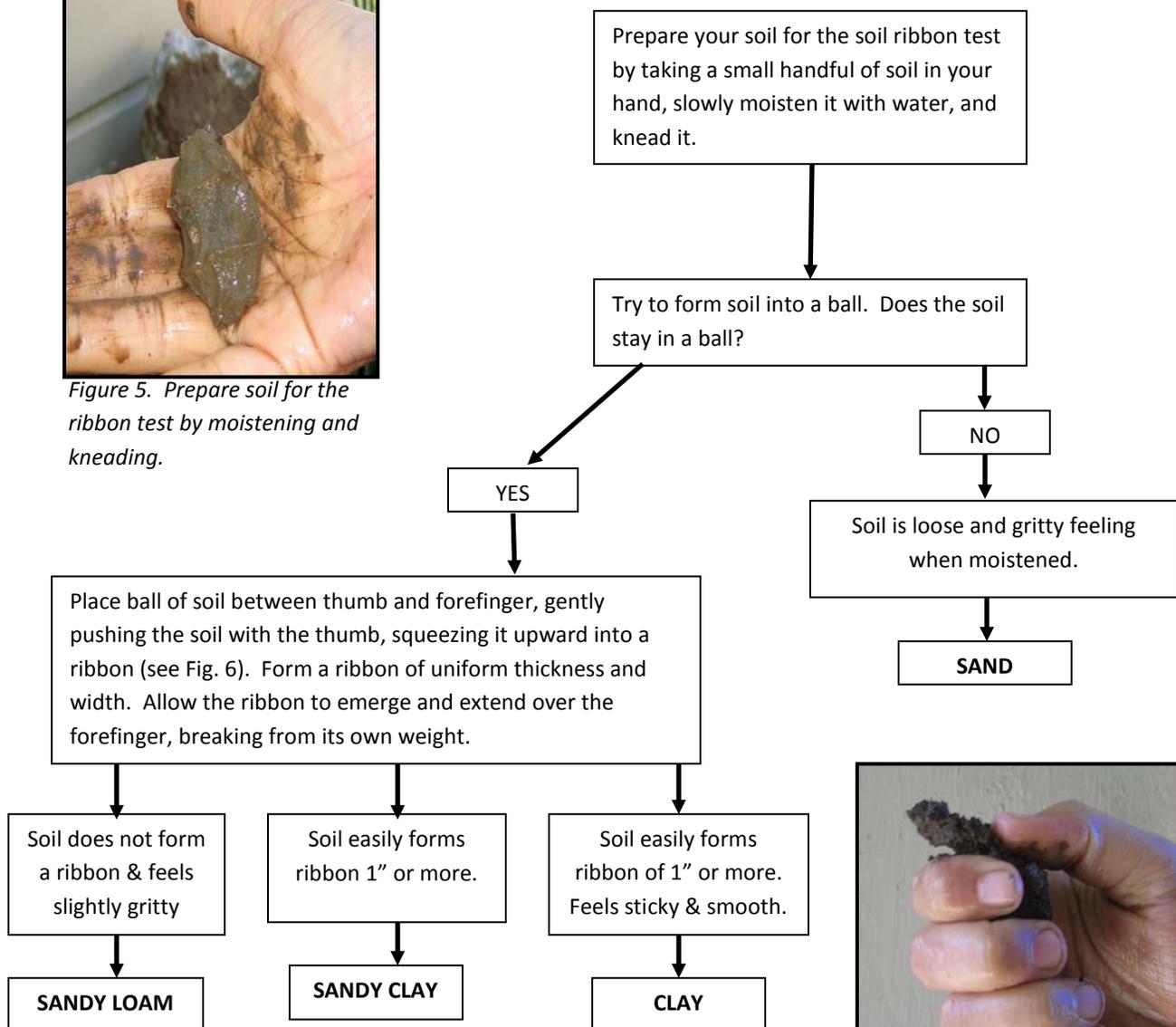


Figure 6. Squeeze soil, pushing upward into a ribbon with thumb.

Drainage Test (Optional)

If you plan to use graywater to irrigate sections of your yard that you already irrigate, you may not need to conduct the drainage test. The test will provide information about how well water absorbs in a particular location. Deeper soils can differ from surface soils, and hardscape (such as an old cement patio) might be buried under your yard. If you are unsure how water absorbs into the soil, a drainage test can help identify appropriate locations for irrigating with graywater. Remember, ponding and runoff of graywater is never allowed. If ponding or runoff occurs, you will need to redesign your system.

1. Dig a hole, approximately one foot deep, in the area where you plan to irrigate with graywater. Insert a ruler or stick marked with inches into the hole.
2. Fill the hole with water and let it soak in. Repeat this several times so that the surrounding soil is saturated when you take your reading.
3. Fill the hole with water again; this time record how long it takes for the water level to go down a few inches. If it drains approximately one inch per hour or faster, you have adequate drainage for irrigating the area with graywater.
4. If it takes longer than two hours for the water level to go down one inch, or the hole doesn't drain all day, don't use graywater to irrigate this area. Try another location to see if the drainage is better. If you irrigate an area that does not have adequate drainage, you could have ponding and runoff. Plants could also be damaged by water-logged soil, so make sure to irrigate only well-drained soils, or amend your soil by adding compost to improve drainage.

Once you know how many gallons per day your home produces, have identified your soil type, and know that water drains well in the area you wish to irrigate, calculate the irrigation area needed to ensure proper drainage of graywater.

Sizing your Graywater System

STEP 3: Calculating your Irrigation Field Area

To calculate your *irrigation field* area, you will need the Estimated Graywater Flow per day (gpd) calculated in Step 1 and the soil type determined in Step 2.

Find your soil type in Table 1 to the right and use the area indicated for your soil type. Multiply the gpd by the area to obtain the minimum area for your irrigation field. Note: your irrigation field can be larger than the calculated area, but not smaller.

Soil Type	Area (ft ²) per Gallon of Graywater (gpd)
Sand	.25
Sandy Loam	.4
Sandy Clay	.6
Clay	.9

Example: Total Estimated Graywater Flow per day = 60 gpd

Soil Type = Sand

$$\text{Irrigation Field Area} = 60 \text{ gpd} \times .25 \text{ ft}^2 / \text{gpd} = \mathbf{15 \text{ ft}^2}$$

Protecting Groundwater

Graywater must be discharged a minimum of three feet above the groundwater table. If you don't know how deep the groundwater is beneath your property, you can check by digging a hole three feet deep. If no water enters the hole, then it is safe to irrigate the area with graywater. If water enters the hole, the groundwater table is too shallow, and graywater may not be used for irrigation. If you dig a hole to check the depth to groundwater, do so during the irrigation season, as this is the time you'll be using graywater. During the rainy months, with any signs of ponding or runoff from rainfall, or in places where the groundwater table rises, all graywater systems must be shut off.

Setback Requirements: Where Not to Put Your Graywater

Your graywater system should irrigate plants without causing problems for you or your neighbors. A setback is a required distance between your graywater system and specific landmarks. The purpose of setbacks is to avoid potential problems caused by nearby land uses. For example, you will need to keep graywater a certain distance from your house to avoid damaging its foundation, from your neighbor's yard to maintain good neighborly relations, and from creeks to prevent contamination of freshwater. Table 2 lists setback requirements in Mendocino.

Table 2. Required Setbacks for Graywater Systems in Mendocino County

Minimum Horizontal Distance from	Irrigation Field (ft)	Storage Tank (ft)
Building structures (not including porches, steps, covered walkways, patios, driveway)	2	5
Private property lines	1.5	5
Water supply wells	100	50
Streams and lakes	100	50

References

Alameda County Waste Management Authority and Alameda County Source Reduction and Recycling Board, 2010. *Bay-Friendly Gardening*. Available at <http://www.stopwaste.org/home/index.asp?page=8>.

Thein, S.J., 1979. *A Flow Diagram for Teaching Texture by Feel Analysis*. *Journal of Agronomic Education*, 8:54-55.

PART 4 – POLICIES

- 4.1 Second Residential Unit Guidelines
- 4.2 Repair Guidelines
- 4.3 Family Care Units
- 4.4 Bedroom Addition Policy
- 4.5 Offsite Easement Policy
- 4.6 Linear Loading Rate
- 4.7 Groundwater Intercept Drains

PART 4 – POLICIES

4.1 SECOND RESIDENTIAL UNITS

Septic

1. A Second Residential Unit that contains only one bedroom, is no larger than 1,000 square feet, and meets the requirements of the Mendocino County planning and building codes may be connected to an existing septic system if the following conditions are met.
 - a. The existing permitted septic system must meet applicable state and county requirements for onsite waste disposal.
 - b. If the property owner or county Environmental Health office cannot provide official documentation that the existing septic system meets applicable state and county requirements for onsite waste disposal systems, then the property owner shall hire a Qualified Site Evaluator to determine whether the existing septic system meets those conditions for approval.
 - c. The property owner shall hire a Qualified Site Evaluator to identify a replacement area that meets applicable requirements and is sized to serve the total number of bedrooms originally in the primary residence plus the total number of bedrooms in the new second residence.
2. A Second Residential Unit that contains more than one bedroom and meets the requirements of the Mendocino County planning and building codes may be connected to an existing septic system if the following conditions are met.
 - a. The property owner must obtain the proper building permits to convert one or more bedrooms in existing structure into other space so that the total combined number of bedrooms in the primary and second residence equal no more than one bedroom greater than the original permitted septic capacity.

Note: Necessary changes to existing bedrooms may include conversion of doors into open archways, the removal or conversion of closets into open shelving or other structures, or other modifications.

- b. The property owner must also meet conditions 1 a–c, as applicable. The new replacement area must be sized to serve the total number of bedrooms originally in

the primary residence, including any that have been removed or converted to facilitate permitting the second residential unit, plus the total number of bedrooms in the second residence.

3. If the property is located within a service district, the property owner must provide written approval from the service district specifically authorizing the connection of a Second Residential Unit.

Water

4. If the source of drinking water is a well or spring, the property owner shall hire a qualified person to determine whether the well or spring meets the county proof of water requirements for a second residential unit.
5. If the property is located within a service district, the property owner must provide written approval from the service district specifically authorizing the connection of a second residential unit.

Second Residential Units, including travel trailers and recreational vehicles, must comply with all requirements of Mendocino County planning and building codes.

4.2 REPAIR GUIDELINES

IMPLEMENTATION

A failure analysis shall be performed to document the problem and establish the probable cause of the failure. If the cause is a collapsed or disconnected pipe the applicant is advised of the cause and that no repair permit is required. If the septic tank is determined to be the cause of the problem, advise the applicant to obtain a permit for the septic tank replacement. The abandonment of a functioning field in order to expand a structures footprint shall not constitute a repair.

When it is determined that the leach field is in failure, a site evaluation investigation shall be conducted to identify a replacement primary leach field area of acceptable soil conditions. A site investigation might rely on a backhoe test trench or three hand augers in combination with previous personal experience in the immediate area.

The Mendocino County LAMP critical criteria, depth to groundwater or impervious layer below the infiltrative surface, may be reduced from the minimum of 24 inches on a case-by-case basis.

If a replacement area was already specified in a Site Evaluation Report for the property, then the EHS or QSE should conduct a site visit to verify soil conditions as reported and determine that

the site has not changed significantly to preclude the use of the designated area. The location and/or design of the replacement area may have to be modified based on the EHS's or QSE's findings. A 100% future replacement field shall be identified utilizing either test pits or three hand augers. This future replacement leach field design shall utilize standard design criteria.

Leach field sizing shall be based on 0.50 gals per sq. ft. per day (utilizing sidewall and bottom area) for sites that pre-date the inception of the Basin Plan Policy. For properties with Site Evaluation Reports completed after the inception of the Basin Plan Policy, either the sizing specified in the Report or, alternately, the most current Basin Plan sizing criteria may be used.

Upon the adoption of the Russian River TMDL additional site criteria may be required at sites identified by the NCRWQCB to be near an impaired water body. Such requirements shall be set forth in the Tier 3 Advanced Protection Management Program for Impaired Areas of the Mendocino County LAMP.

4.3 FAMILY CARE UNITS

Environmental Health Division will continue its policy of allowing a temporary FCU to temporarily utilize the existing sewage system of the existing original residence where the proposed FCU is clearly temporary in nature, such as a camp trailer, motor home, or RV of any kind.

Where the FCU proposal is the construction/installation of a permanent structure, a Site Evaluation Report (SER) and letter of "willingness and ability" from the water supply district shall be required. Any structure that requires a building permit is considered a permanent structure for the purposes of this policy. Once the SER is reviewed and approved and an adequate water supply demonstrated, Environmental Health's staff may approve the Administrative Permit for the FCU.

Environmental Health may grant an exception to the requirement for additional septic system capacity for very small permanent one bedroom FCUs equal to or less than 640 square feet in size.

4.4 BEDROOM ADDITION POLICY

The EHO may approve an additional bedroom(s) or 10% increase in flow from a commercial establishment if it can be found that the increased use of the disposal system will not exceed its reasonable capacity and one of the following:

1. That the disposal system was based on a Site Evaluation Report completed in accordance with the requirements of the WQCB Basin Plan Policy and identifies an available replacement area capable of accommodating the proposed increase of use.

OR

2. That the Soil Conservation Service Soil Survey of Mendocino County Table 11 – Sanitary Facilities indicates slight limitation for septic tank systems and there is an available replacement area capable of accommodating the proposed increase of use.

OR

3. That adequate soil conditions, consistent as nearly as possible with the current WQCB Basin Plan Policy for Waste Water Disposal, exist on the property, as determined by the EHO or a Qualified Private Site Evaluator (QPSE), and there is an available replacement area capable of accommodating the proposed increase of use.

REQUIRE QPSE ONLY FOR CRITICAL CONDITIONS

The EHO should consider the requirement of a QPSE only for critically limiting conditions such as: high strength commercial waste, large volume flows, large increase in flows, severe soil and/or groundwater conditions, or sites requiring alternative/experimental systems.

The key question for the EHO to ask is: will a QPSE provide additional critical information, beyond our capacity and which is vital for a successful design?

If yes, then the property owner should be required to hire a QPSE to identify a replacement area consistent as nearly as possible with the current WQCB Basin Plan Policy for Waste Water Disposal.

BEDROOM DEFINITION

A bedroom, for purposes of sizing on-site sewage systems, shall be defined as: any room designated by applicant as a “bedroom”; other rooms, such as sewing rooms, dens, offices, studios, lofts, game rooms, etc. may also be considered as bedrooms.

Rooms having one or more of the following features may not be considered by the Health Officer to constitute a bedroom:

1. A large (6–8 feet opening) arched frameless doorway without a door which opens into the entry way or a main activity area.
2. Use of a half wall or railing along at least one side of the room.
3. If the space is 70 square feet or less.

Notwithstanding the above provisions, the minimum number of bedrooms for any dwelling shall be no less than the following:

Gross Floor Area	No. of Bedrooms
0 – 1500 SF	1
1501 – 2100 SF	2
2101 – 3000 SF	3
Over 3001 SF	4

4.5 OFFSITE EASEMENT POLICY

It is the preferred position of the Environmental Health Division to have private sewage disposal systems located entirely within the boundary of the lot which is the site of the building or structure served by such private sewage disposal system to the extent practical.

Prior to approval of a sewage disposal easement, applicants should be advised to attempt a boundary line adjustment or parcel merger.

The use of off-site easements for sewage disposal in conjunction with the creation of new parcels through the subdivision process is generally discouraged and will be considered only in appropriate circumstances where the applicant can demonstrate to the satisfaction of the County of Mendocino that the sewage disposal system will not negatively impact natural resources and be properly maintained and monitored to minimize the risk of damage.

Authority

1. California Plumbing Code, Appendix K, incorporated in Mendocino Code, Section 16.08.130
2. California Health and Safety Code, Sections 17922 and 17958
3. Mendocino County General Plan
4. Government Code Section 66412(d)
5. Mendocino County, County Counsel’s opinion #07-199, March 20 & October 10, 2007
6. Mendocino County, County Counsel’s opinion #09-0993, September 10, 2009
7. Mendocino County Code, Chapter 17
8. Mendocino County Code, Chapter 20.532
9. Mendocino County Code, Chapter 20.016

Procedure – Boundary Line Adjustment

1. Property Located in Coastal Zone

A proposed boundary line adjustment (BLA) must be approved by the Coastal Permit Administrator (CPA) pursuant to Mendocino County Code section 20.532.015. A decision of the CPA may be appealed to the Board of Supervisors or the Coastal Commission.

Boundary line adjustments will not be considered to allow development for lots recognized by a Certificate of Compliance, land patent, or other instrument that may establish the lands as legally separate unless currently developed or able to be developed in the lands existing configuration.

2. Property Located Outside Coastal Zone

A proposed BLA in which the parcels are in conformance with the minimum applicable lot size for sewer and water under the standard of the General Plan may be processed by application to the Subdivision Committee (staff level). Reduction of the number of parcels to permit resulting configuration to be self-contained for sewer and water may also be considered at the staff level.

Boundary line adjustments will not be considered to allow development for lots recognized by a Certificate of Compliance, land patent, or other instrument that may establish the lands as legally separate unless currently developed or able to be developed in the lands existing configuration.

Procedure – Sewage Disposal Easements for Existing Parcels

Off-site sewage disposal easements will be considered for parcels that are:

1. Already developed with a residential, commercial, industrial, or institutional use type as defined in Mendocino County Code Chapter 20.016.
2. Vacant parcels 6000 square feet or larger that can meet contemporary zoning standards related to building setbacks under the Zoning Ordinance and which will meet DEH standards if an offsite sewage easement is permitted, so long as the parcel is left in its existing configuration.

Procedure – Sewage Disposal Easements for New Subdivisions of Property

1. All septic system designs will comply with state LAMP requirements.
2. The Division of Environmental Health will consult with Planning & Building Services at the Subdivision Committee and that recommendation will be considered by the Planning Commission for action.

Procedure – Sewage Disposal Easement Requirements

This section identifies the requirements for establishing a sewage disposal easement.

1. The sewage disposal system or part thereof shall be located on an abutting lot of the site of the building or structure served by such sewage disposal system. Roads shall not be considered as a separation in defining an abutting lot.
2. Easements shall be recorded with the County Clerk Recorder's Office. This shall include:
 - a. A non-exclusive easement grant deed conveying the easement from the record owners of the burden parcel to the owners of the parcel to be developed.
 - b. A full legal description of the easement area prepared by a Licensed Land Surveyor or Registered Civil Engineer licensed to survey.
 - c. All appurtenant easements for access, pipelines, drainage, etc., shall be conveyed in the easement grant deed.
 - d. The following Conditions and Restrictions shall be recorded on the deed:

The use of the area of the leach field easement by the grantor shall be restricted from uses which are incompatible with proper leach field operation. This shall include structures, grazing livestock, vehicular parking, road ways, drainage courses, wells or other uses which would disrupt the leach field.

3. Leach field easements shall be separate and distinct from one another, unless a maintenance entity is established in accordance with County policy regarding the creation of community leach fields.
4. A Record of Survey map will be required, and the easement corners and angle points shall be identified by a Licensed Land Surveyor or Registered Civil Engineer licensed to survey. Additional six foot steel fence posts may be required to clearly identify the location of the septic easement.
5. Septic systems that require a sewage disposal easement shall be placed in the county's non-standard septic system program. Standard septic systems with easements in close proximity to the structure served shall not be placed in the non-standard septic system program for monitoring and maintenance.
6. Each sewage disposal easement shall provide sufficient area so that all activities necessary for the installation, maintenance and monitoring of the leach fields and transmission line may occur solely within the area of that easement. In some cases, the easement may require additional space to allow access for necessary construction equipment.
7. The following setback, sizing and construction requirements shall apply to all sewage disposal easements:
 - a. A minimum 20-foot perimeter shall be required around each leach field area of sewage disposal easement. For the purposes of this requirement, the leach field shall be deemed

to include any cover soil that extends beyond infiltrative surfaces.

- b. Single transmission line corridors that are less than 100 feet in length and which are not used to provide equipment access shall be a minimum of 12 feet in width. A transmission line and an associated return line shall be treated as a single line for the purposes of this and all following requirements.
- c. Single transmission line corridors that are greater than 100 feet in length, contain multiple transmission lines, or are used to provide equipment access shall be a minimum of 20 feet in width.
- d. A tracing wire with ends that are protected and easily located shall be required for each transmission line.
- e. If multiple transmission lines are placed within the same transmission line easement, transmission lines shall not cross over other transmission lines. Each line shall be situated within the allotted easement area to facilitate the safe installation and future maintenance of individual lines.
- f. A minimum 20-foot wide easement corridor shall be required to ensure equipment access to the disposal area. Environmental Health may require additional width where the access corridor contains corners, bends, large trees, rock outcroppings or any other obstacle.
- g. If equipment access is provided via a transmission line corridor, the transmission line shall be installed in a manner that will protect it from being damaged by the movement of equipment and materials.
- h. The owner whose property is served by a septic easement shall be responsible for maintaining that easement, including the repair of required borders or boundary markers and the removal of vegetation for fire suppression.
- i. The minimum widths of 20 feet referred to in paragraphs 7a, 7c and 7f, above may be modified to widths of no less than 12 feet if the applicant can demonstrate to Environmental Health that this is adequate, based on constraints such as slope of the ground, the vegetative cover, and the type of system proposed.

APPENDIX A

Summary of Boundary Line Adjustment and Septic Easement Approval Processes

I. Boundary Line Adjustments

1. Are the parcels in the Coastal Zone?

If yes, then go to Question 2.

If no, then go to Question 4.

2. Are the parcels recognized by Certificates of Compliance?

If yes, then go to Question 3.

If no, then Coastal Permit Administrator (CPA) must review for approval. A decision of the CPA may be appealed to the Coastal Commission or the Board of Supervisors.

3. Are the parcels, in their existing configurations, either currently developed or able to be developed?

If yes, then Coastal Permit Administrator must review for approval. A decision of the CPA may be appealed to the Coastal Commission or the Board of Supervisors.

If no, then the applicant will be informed that policy does not permit a BLA; however, applicant may request review by the CPA. A decision of the CPA may be appealed to the Coastal Commission or the Board of Supervisors.

4. Do the parcels currently conform with minimum lot size requirements?

If yes, then staff will review for approval. A denial by staff may be appealed to the Planning Commission.

If no, then go to Question 5.

5. Are undersized parcels being merged to create a single parcel that will be self-contained for sewer and water?

If yes, then staff will review for approval. A denial by staff may be appealed to the Planning Commission.

If no, then go to Question 6.

6. Are the parcels, in their existing configurations, either currently developed or able to be developed?

If yes, then Planning Commission must review for approval. A decision of the Planning Commission may be appealed to the Board of Supervisors.

If no, then the applicant will be informed by staff that policy does not permit a BLA. However, applicant may request review by the Planning Commission. A decision of the Planning Commission may be appealed to the Board of Supervisors.

II. Septic Easements

1. Is easement needed to serve existing developed parcel?

If yes, then staff can review for approval.

If no, then go to Question 2.

2. Is easement needed to serve new parcels created by a proposed subdivision?

If yes, then Planning Commission must review for approval.

If no, then go to Question 3.

3. Is easement needed to serve a vacant parcel that meets contemporary zoning standards and building setbacks, and will that parcel meet DEH standards if an offsite septic easement is permitted?

If yes, then staff can review for approval or refer to the Planning Commission.

REGULATORY BACKGROUND: There are numerous statutory and policy considerations when attempting to address this issue. Unfortunately, some of the directives contain ambiguities or appear to conflict with one another. In the following section identifies some of the laws, regulations and policies which should be considered. In some entries, phrases are highlighted in **bold type** to accentuate sections that may be germane to this discussion.

I. The Use of Off-site Septic Easements

- California Plumbing Code, Appendix K, Section G (incorporated in Mendocino County Code at section 16.08.130) states:
 - No private sewage disposal system, or part thereof, shall be located in any lot other than the lot that is the site of the building or structure served by such private sewage disposal system, nor shall any private sewage disposal system or part thereof be located at any point having less than the minimum distances indicated in Table K-1.
 - Nothing contained in this code shall be construed to prohibit the use of all or part of an abutting lot to provide additional space for a private sewage disposal system or part thereof when proper cause, transfer of ownership, or change of boundary not in violation of other requirements has been first established to the satisfaction of the authority having jurisdiction.

NOTE: This section is confusing, to a degree, in that it provides an exception to the stated general prohibition against the use of sewage disposal easements.

II. The Creation of Boundary Line Adjustments.

- Mendocino County Code Section 17-17.5 states, in part:

- "Boundary line adjustment" means the transfer of property by deed to a respective owner or owners of contiguous property for the purpose of adjusting a boundary line and **not for the purpose of creating an additional lot or parcel.**
- Subdivision Map Act Section 66412(d) regulates boundary line adjustments. It states:
 - A lot line adjustment between four or fewer existing adjoining parcels, where the land taken from one parcel is added to an adjoining parcel, and where **a greater number of parcels than originally existed is not thereby created**, if the lot line adjustment is approved by the local agency, or advisory agency. A local agency or advisory agency shall limit its review and approval to a determination of whether or not the parcels resulting from the lot line adjustment will conform to the local general plan, any applicable specific plan, any applicable coastal plan, and zoning and building ordinances. An advisory agency or local agency shall not impose conditions or exactions on its approval of a lot line adjustment except to conform to the local general plan, any applicable specific plan, any applicable coastal plan, and zoning and building ordinances, to require the prepayment of real property taxes prior to the approval of the lot line adjustment, or to facilitate the relocation of existing utilities, infrastructure, or easements.
- The California Environmental Quality Act provides for a categorical exemption to boundary, or lot line, adjustments, but qualifies the exemption as follows:
 - Section 15305. Minor Alterations in Land use Limitations.
 - Class 5 consists of minor alterations in land use limitations in areas with an average slope of less than 20%, **which do not result in any changes in land use or density**, including but not limited to:
 - **Minor lot line adjustments**, side yard, and set back variances not resulting in the creation of any new parcel;
 - Issuance of minor encroachment permits;
 - Reversion to acreage in accordance with the Subdivision Map Act.

NOTE: There is no definition of what a “minor lot line adjustment” is, nor is an alternative “major” lot line adjustment discussed.
- Mendocino County Code Section 20.532.015(D) states:
 - Coastal Development Standard Permit. **A coastal development standard permit must be secured for** any other activity not specified above which is defined as a development in Section 20.308.035(D), including, but not limited to, land divisions, **lot line adjustments** and any other entitlement for use.
- The General Plan contains the following Development Element Policies:

- Policy DE-31: **Legally created parcels (including certificates of compliance) that do not comply with development requirements shall only be developed conditional to the satisfaction of basic requirements for health, safety, access and orderly development.**
- Policy DE-32: Allow development of legal nonconforming lots, structures and uses that are consistent with General Plan, environmental and community objectives and seek the discontinuance of those which are not consistent. The following standards shall apply:
 - **Legal nonconforming lots may be developed, subject to current development standards,** legal nonconforming structures may be used, and legal nonconforming uses may continue when basic health and safety are provided.
 - Discontinued or destroyed legal nonconforming uses and structures must be reestablished within a reasonable time, as established in the Development Code, or future uses must conform to applicable regulations.
- LCP Policy 3.8-7 states:
 - Land divisions and subdivisions creating new parcels or building sites or other proposed development, **including lot line adjustments,** mergers and issuance of conditional certificates of compliance **shall be approved only** where a community sewage disposal system with available capacity exists and is obligated to provide service or **where a satisfactory site for a sewage system exists.** Leach field approval shall require satisfactory completion of a site evaluation on the site of each proposed septic system. A leach field shall not be located where the natural grade exceeds 30 percent slope or where there is less than 5 feet of soil below the trench if natural grade exceeds 20 percent slope. This septic system policy is consistent with the Minimum Guidelines for the Control of Individual Wastewater Treatment and Disposal Systems adopted by the Regional Water Quality Control Board on April 17, 1979.
- The County's Division of Land Regulations (Chapter 17 of the County Code) states as its purpose:
 - This Chapter is enacted **for the purpose of promoting the public health,** safety, convenience, and general welfare in accordance with the general plan of the County of Mendocino, **including** but not limited to **the elimination of:**
 - (A) The creation of **lots of inadequate size and poor design;**
 - (B) The **creation of building sites in areas where topography, flooding, or other factors will prevent safe, orderly, and beneficial land development;**
 - (C) The creation of roads of improper width, alignment, grade, and improvements;
 - (D) **Hazards to life or property from sewage effluent** or inadequate drainage;

- (E) The lowering of property values and the loss of opportunity for satisfactory overall development of neighborhoods caused by successive, uncontrolled and haphazard land divisions;
- (F) The excessive cost to taxpayers of Mendocino County for providing services within the Subdivision.

4.6 LINEAR LOADING RATE (IN SHALLOW SOIL ON > 20% SLOPE)

This policy is consistent with the US EPA Onsite Wastewater Treatment Systems Manual Section 4.4.6 “*Geometry, orientation, and configuration of the infiltration surface*”.

Long narrow trenches on the slope contour are highly recommended and the reader is cautioned against exceeding the maximum contour loading though no quantitative data are presented.

For purposes of this policy the most recent Wisconsin At-Grade Design Manual shall be used as a source of quantitative data for Linear Load Rate (LLR). LLR shall mean the sum of the hydraulic loadings to one or more lines per each unit of contour length. Design Principles are discussed on pages 5 through 7 of the Manual and represented on Figure 3, a copy of which is attached to this policy. The Basin Plan criteria as shown below shall be used to provide definition for the 4 different soil profile conditions of Figure 3 of the At Grade Design Manual.

Criteria for granting approval for soil depth <3 feet on slopes >20%:

- A. Trench Systems:
 - 1. Pressure distribution shall be required and;
 - 2. Linear loading rates consistent with the At-Grade Design Manual and;
 - 3. Cross sectional details specifying how the trenches are to be constructed.

- B. Drip Emitter Systems:
 - 1. Pressure Compensating emitters shall be required and;
 - 2. Linear loading rates consistent with the At-Grade Design Manual and;
 - 3. Cross sectional details specifying on-center spacing of drip laterals.

- C. Linear Loading Rates from the At-Grade Design Manual (Fig. 3.) shall be defined consistent with the LAMP as follows:
 - 1. Impermeable Soil Layer = >120 MPI and LLR = 4 gpd/lf
 - 2. Semi-permeable Soil Layer = >60 and <120 MPI and LLR = 6 gpd/lf
 - 3. Water Table = >5 and <60 MPI and LLR = 8 gpd/lf
 - 4. Creviced Bedrock = >1 and <5 MPI and LLR =10gpd/lf

Sites that cannot meet these criteria may be considered if a Slope Stability Study is completed by a qualified geo-technical engineer to the satisfaction of the Environmental Health Division.

4.7 GROUNDWATER INTERCEPT DRAINS

Implementation

A) TESTING

A good groundwater intercept drain design will depend on adequate testing. In order to reasonably assure the drain will key into the impermeable layer along the alignment, it is the policy of DEH to require 3 test profiles. One at each of the two ends and a third at the mid-point of the gravel filled portion of the intercept drain alignment. This can be accomplished with either a backhoe or hand auger. The depth to the impermeable soil layer shall be reported in the SER.

B) DESIGN

Certain design factors are important to the initial and continued satisfactory operation of the groundwater intercept drain.

1. It is the policy of DEH to require that the bottom of the drain extend a minimum of 1 foot into the impermeable layer or down to the soil/rock interface of hard bedrock. This is to assure that the invert of the drainpipe is at or below the impermeable layer.
2. The drain pipe shall be a minimum of 3 inch rigid perforated drain pipe on a minimum grade of 0.25% (3 inches per 100ft) and placed on a minimum 3 inch gravel base (maximum 6 inch gravel base). This is to insure the pipe is not imbedded or crushed into the trench bottom reducing its carrying capacity.
3. The GID trench width may be 12 inches or less and gravel may be 1 ½" or ¾" size.
4. The perforated drainpipe shall have screw capped clean-outs brought up to natural grade at the two ends and the mid point, if the mid-point is the high point and outlets on both sides. Clean-outs insure that continuity can always be checked, maintenance performed and the line flushed as needed.
5. The outlet shall be covered with a screen or perforated pipe that has maximum of ¼ inch openings. This is to assure that rodents or other animals do not block the drain with their nests. Outlets are encouraged at both ends of the GID. The proposed drain discharge point shall not adversely impact down-slope sewage systems or other neighboring improvements.
6. GID drawings shall be provided showing scaled cross-sectional and plan views.
7. Groundwater monitoring well(s) shall be installed down-slope of the GID to monitor the GID effectiveness.

C) INSPECTIONS

DEH inspection of the groundwater intercept drain shall include the following critical control points as a minimum. Alternately, a qualified professional designer may inspect and certify to DEH these same critical control points as a minimum.

OPEN TRENCH

1. The length of the open trench (prior to the placement of the drain rock) shall be inspected for the presence of the impermeable layer being keyed into and the depth of the drain per

design. This may require phased inspections and close coordination between EH staff and the contractor. The minimum slope (0.25%) of the trench bottom shall be verified at this time with an eye level, or builder's level or laser level.

2. Do not enter the trench if greater than 5' deep or if it appears unstable in anyway.
3. The type of drainpipe used, gravel bedding and filter fabric or other specified materials shall be checked for compliance with the specifications.

FILLED TRENCH

4. The presence and proper location of clean-outs shall be checked in addition to the final lift of the gravel fill to the specified elevation.
5. The presence of a proper rodent screen shall be checked at the time of final inspection.
6. The presence of ground water monitoring wells installed to the depth of the impervious layer on the down-slope side of the GID shall be verified.

D) ALTERNATE OPERATIONAL DEMONSTRATION

A GID may be approved without DEH (or a qualified professional designer) inspection if it can:
1) be demonstrated to the satisfaction of DEH to have effectively lowered ground water to Basin Plan LAMP criteria, and demonstrated compliant through groundwater monitoring at the two ends of the most distant proposed trench location and 2) be shown that the installation of cleanouts, screened outlets and monitoring wells are consistent with this policy.

COUNTY OF MENDOCINO
LOCAL AGENCY MANAGEMENT PLAN (LAMP)

PART 3

3.2 Local Agency Monitoring and Reporting Responsibilities

Annual Report. Mendocino County shall submit a report to the Regional Water Quality Control Board (RWQCB) that includes the following information:

- Permitting actions such as installations, replacements, repairs, and waivers.
- Complaints received and associated investigation outcomes
- Septage pumping applications received and permits issued
- Water quality assessment data

3.2.1 LAMP General Requirements

The Mendocino County LAMP applies to OWTS producing flows of less than ten thousand (10,000) gallons per day. If the proposed flow is greater than ten thousand (10,000) gallons per day or the project involves high strength waste the method of treatment and disposal shall be approved by the NCRQWCB. All existing mobile home parks will require approval by the NCRWCB. The County reserves the right to accept projects on a case by case basis while working with the NCRWQCB.

3.2.2 Permit and/or Inspection Requirements

Installation permits records are maintained in address file copies as well as the Environmental Health Access Database. Operational Permits for alternative treatment systems are also maintaining within the Environmental Health Access Database as well as complaints. Permit information can be accessed and available to the RWQCB within 10 working days upon written request.

3.2.3 Water Quality Assessment Program

The purpose of this LAMP is to establish standard and policies for the installation, operation, and maintenance of OWTS in order to protect water quality and public health. The water quality monitoring element is intended to track the impact of OWTS effluent on ground water and surface water as well as the effectiveness of the LAMP in addressing those impacts over time. The County will use data from available sources consistent with LAMP Section 9.2.3 to asses groundwater quality.

In addition to the water systems operated by the cities and special districts, there are a number of smaller public and semi-public water systems operating in Mendocino County. Most of these smaller systems utilize groundwater exclusively and all are required to perform routine water quality monitoring as a

conditions of their Domestic Water Supply Permits. The Division of Environmental Health proposes to utilize this data to measure OWTS impacts on ground water.

3.2.4 Reporting to Regional Water Board/State Water Board

An annual report summarizing all installations, repairs, complaints, and alternative systems monitoring shall be supplied to the RWQCB no later than February 1 of each year. In addition to the annual reporting every fifth year an evaluation of the monitoring program shall be submitted to the RWQCB due no later than February 1. Groundwater or surface water data collected shall be uploaded to the Geotracker, DEDEN, and SWAMP databases.

3.3 Site Evaluation, Design, Construction, and Monitoring

3.3.1 Qualified Professional Requirements. Site evaluations in accordance with this policy shall be performed by individuals who by virtue of their education, training, and experience, are qualified to examine and assess soil, geologic, and hydrologic properties as related to subsurface effluent disposal. Credentials required of such individuals shall include as a minimum, education, training, and license as geologist, soil scientist, registered civil engineer, or registered environmental health specialist.

3.3.2 OWTS Site Evaluation

9.1.1 All designs for new sewage disposal systems require a site evaluation conducted by a qualified site evaluator. It is the intent of each site evaluation to consider site specific soil application rates in the most appropriate soil horizons. Evaluators are required to demonstrate the best available evidence of the highest anticipated groundwater at each site. This may include but is not limited to the presence of soil mottling and or direct observations. Mendocino County has required setbacks to water wells as well as surface waters and potential geotechnical situations. In addition to the stringent requirements of all site evaluations Mendocino County Environmental Health staff review each submittal carefully and may at times confer with the site evaluator to address any concerns that may arise from design proposal. If staff is not confident that the design is protective enough the site evaluation may be revised until adequate protections are in place. All of these requirements are in place to prevent groundwater pollution and protect public health.

9.1.2 High quality waters or other environmental conditions. The Minimum Lot Size in Mendocino County requires in Inland Areas a minimum of 40,000 square feet (a Mendocino Acre) to develop a sewage disposal system with an on-site well. Inland Areas are currently only allowed two residential units per parcel. Coastal areas are prohibited from have second residences on any parcel. The average rainfall for the county is 40 inches a year. Per Table 1 of section 7.8 on the State OWTS Policy development should not exceed half and acre per residential unit which is on par with the county's' lot size requirements.

Existing geographic areas with existing higher densities that predate current code requirements are considered as Tier 0 until a failure is documented. Upon documentation of failure the system will then be repaired per the requirement stated in Tier 2 of this LAMP. These systems will be mapped and reported to the State in the county's annual report.

- 9.1.3** Shallow soils requiring a dispersal system installation that is closer to ground surface than is standard. Mendocino County has managed a program for non-standard designs under the regional board for over two decades very successfully. Alternative methods of sewage disposal have been developed to overcome specific constraints imposed by soils, groundwater or other conditions, which would otherwise preclude the installation or proper functioning of a conventional sewage disposal system. Mendocino County Code Section Sec. 16.08.020 - Regulation of Installation or Alteration of Sewage Systems. Mendocino County OWTS Technical Standards requires a qualified professional perform site evaluations. If shallow soils are found an alternative sewage treatment system (ASTS) shall be designed and installed in accordance with Mendocino County OWTS Technical Standards. Mendocino County OWTS Technical Standards require conventional systems to have a minimum of 12" of soil cover which may be acceptable fill material. If unable to provide a minimum of 12" of soil cover over conventional dispersal system due to shallow soil depth and still provide 36" minimum suitable soil below trench bottom, an alternative sewage treatment system is required.
- 9.1.4** High domestic well usage area. Mendocino County staff currently GPS all new well location sites and will continue to do so. If a pattern of areas with high domestic well usage develops, consideration will be given to further study these areas relative to areas identified as having a high incidence of sewage dispersal system failure or potential for soft failures with pathogen transport toward receptor wells.
- 9.1.5** Fractured bedrock. Mendocino County requires a qualified professional perform site evaluations. If shallow soils are found due to fractured bedrock, an alternative sewage Treatment system (Non-Standard) shall be designed and installed in accordance with Mendocino County requirements. A minimum of 2 feet of acceptable soil between the dispersal area and the fractured bedrock is required for the design of any Non-Standard Septic Design. Specific non-standard designs with advanced treatment (mound, aerobic treatment, etc.) are suitable for sites with only 2 feet of soil between the dispersal area and the limiting condition.
- 9.1.6** Poorly drained soils. Mendocino County requires a qualified professional perform site evaluations. If poorly drained soil is identified, limiting the amount of acceptable soil, an alternative sewage dispersal system (Non-Standard) shall be designed and installed in accordance with Mendocino County standards. A minimum of 2 feet of acceptable soil above the poorly

drained soils is required for the design of any non-standard septic system. Specific non-standard designs with advanced treatment (mound, aerobic treatment unit, etc) are suitable on sites with only 2 feet of soil. Other options for improving drainage may be identified during the site evaluation. An example would be the requirement to construct an interceptor drain if located on a sloping site.

- 9.1.7** Vulnerable surface water. Mendocino County Code requires a 200 foot setback to any water supply watershed reservoir. Code will be modified to require a 400 foot setback if the disposal system is located less than 1200 feet to a public water system intake line. The areas around our surface water supplies are sparsely populated except where public sewer is available. We will need to adopt portions of the Basin Plan into this section.
- 9.1.8** Impaired water bodies. The Russian River has a draft TMDL and is expected to be subject to Tier 3 requirements upon adoption.
- 9.1.9** High OWTS density areas. Nitrate has not been identified as a chronic issue in any area of Mendocino County. Should monitoring results (see comprehensive monitoring plan in section (9.3.2) or data analysis show a concerning trend over the next five years for nitrate contamination this LAMP will be reevaluated and updated as needed to consider nitrogen loading per area. Mendocino County include the requirement for total and fecal coliform testing as well as nitrate testing whenever a yield test is required for new development.
- 9.1.10** Limits to Parcel Size. Per Mendocino County Code Sec. 16.08.060 -Minimum Lot Area; No on-site sewage system shall be installed or approved unless it complies with the following minimum lot size requirements:
 - (A) Where a water supply and distribution system and sanitary sewer system are provided, the lot area shall be not less than six thousand (6,000) square feet, and the lot width shall be not less than sixty (60) feet in width on the building line or less than eighty (80) feet in depth.
 - (B) Where a water supply and distribution system is provided, the lot area shall not be less than twelve thousand (12,000) square feet, and the lot width shall be not less than eighty (80) feet.
 - (C) Where neither a water supply and distribution system nor a sanitary sewer system is provided, the lot area shall be not less than forty thousand (40,000) square feet, and the lot width shall be not less than one hundred (100) feet.
 - (D) For lots which are to be used for commercial or industrial purposes or where there are unusual topographical or other special conditions, the Health Department may grant exceptions to this provision.
 - (E) Each and every lot or parcel of a subdivision approved based upon the use of an alternative sewage system shall be a minimum of forty thousand

(40,000) square feet net. Systems proposed for lots less than eighty thousand (80,000) square feet net may be required to complete a cumulative impact survey prior to approval of the subdivision.

In addition to the Minimum Lot size Code all new site evaluations for sewage disposal systems are required to account for an area for 100% replacement of the current level of use on that parcel.

9.1.11 Areas with OWTS that predate adopted standards are dispersed throughout the County. Existing conditions are allowed to continue as is under Tier 0 until or unless a failure is identified. These failures will be captured in a data base and in the future mapped to a GIS layer. If a particular area with OWTS that predate adopted standards is identified during the 5 years between LAMP assessment reports as being one with a significantly higher number of failures, the LAMP will be updated as needed to address and include special considerations for continued protection of groundwater and the environment.

9.1.12 Areas with OWTS either within prescriptive, Tier 1 setbacks, or within setbacks that a Local Agency finds appropriate. There are no areas in Mendocino County with known multiple, higher density developments with existing OWTS that are within the prescriptive setbacks set forth in Tier 1. Those that may exist are limited and dispersed throughout the County with no known concentrations of systems of this type.

9.2 SITING DESIGN AND CONSTRUCTION REQUIREMENTS

The Mendocino County LAMP shall cover the following types of Onsite Wastewater Treatment Systems (OWTS): domestic residential and commercial wastewater systems producing flows of 10,000 gallons-per-day or less. The LAMP shall provide regulations and guidelines for the local site evaluation conducted by a qualified professional, siting, design, construction monitoring and maintenance requirements (see Mendocino County OWTS technical standards). It additionally covers each of the following:

9.2.1 Installation and inspection permits. The LAMP provides requirements for OWTS inspection, monitoring, maintenance, and repairs, including procedures to ensure that replacements or repairs to failing systems are done under permit from Mendocino County Environmental Health Division (see Chapter 13.32 of County Code related to repairs and variances). Refer additionally to Mendocino County OWTS technical document. All new installations require a plan review, installation permit and construction inspections. Additionally all new Non-Standard sewage disposal systems require semi-annual operating permits and routine inspections by either County staff and/or a service provider. A standard operation and maintenance manual (O&M) will be provided by the County for conventional sewage disposal systems. All Non-Standard systems will have an O&M manual prepared by the design professional.

- 9.2.2** The NCRWQCB and the State Water Resources Control Board (SWRCB) have a draft to the Water Quality Control Plan (Basin Plan) for the North Coast Region to establish a Russian River Watershed Pathogen Total Maximum Daily Load (TMDL) and Implementation plan. The draft TMDL proposes to designate Mendocino County, specifically the Division of Environmental Health as the responsible party for implementing actions related to OWTS and may require a plan and implementation schedule be submitted to the NCRWQCB. Existing, new and replacement OWTS near the Russian River will be addressed with the implementation of this TMDL. The draft TMDL report data indicated that failing OWTS may be contributing to creek contamination therefore Mendocino County proposes: All parcels with septic systems bordering the main stream Russian River, Commisky Creek, Dry Creek, Feliz Creek, Forsythe Creek, Pieta Creek, York Creek, and Mill Creek are flagged in the Divisions current septic permit tracking system as being adjacent to an impaired water body. This will trigger extra diligence from County staff in reviewing and septic system related permit or inquiry. Should any parcel near the impaired creeks be identified as having a failing septic system, the County will expeditiously use all tools at its disposal to immediately remedy the situation.
- 9.2.3** The LAMP recognizes that not all new, replacement, or repair OWTS will be able to meet minimum required setbacks, soil depth, groundwater separation, and/or additional minimum requirements and has therefore provided for a variance section to address such circumstances. Variances will not be permitted for cesspools or seepage pits of any kind or size or for new, replacement, or repair. The variance process will not authorize any of the prohibited items in Section 9.4 of the Policy.
- 9.2.4** The LAMP provides educational, training, certification, and/or licensing requirements that will be required of OWTS Service Providers, Site Evaluators, Installers, Maintenance Contractors, and any other person relating to OWTS.
- 9.2.5** The LAMP provides a plan for an education and outreach program including informational materials to inform OWTS owners about how to locate, operate, and maintain their OWTS. Additionally see section 9.2.2 above. Property owners are further advised to visit Mendocino County's Public Website (<http://www.co.mendocino.ca.us/hhsa/chs/eh/landuse.htm>) as well as the State Water Board website for publications (e.g. Basin Plan prohibitions) regarding OWTS restrictions within its jurisdiction. Regarding education related to ongoing operation and maintenance, alternative OWTS designers must provide the homeowner with an operation and maintenance manual specific to the type of system installed. Verification of delivery of a copy of the operation and maintenance manual must be documented. The County will retain a copy of the operations manual for future replacement needs. The operation manual

shall cite homeowner or Service Provider procedures to ensure maintenance, repair, or replacement of critical items within 48 hours following failure.

9.2.6 There are currently three septage receiving facilities within Mendocino County. The City of Willits Waste Treatment facility, the H-H septage site in Point Arena, and the Tunzi Ranch in Comptche. Future septage treatment sites are of interest and benefit to the county.

The Division of Environmental Health maintains records and permits of septage haulers operating in this county. See Mendocino County Code Chapter 9.12 Regulation of Sewage and Septage Pumpers for the detailed requirements. All pumpers must submit quarterly reports of their monthly pumping and dumping locations to the division. DEH also conducts annual inspections of all vehicles hauling sewage in the county. DEH will continue to maintain the records in our current database and conduct inspections.

9.2.7 Presently there are no onsite wastewater maintenance districts in Mendocino County and currently none are under consideration. Mendocino County Code Sec. 16.08.070 prohibits the development of subdivisions using Innovative Sewage Systems. Mendocino County Code sections 16.12 & 16.16 prohibit any development utilizing onsite septic with the Ukiah and Meadowbrook Manor Sanitation Districts and can be connected to an existing public sewer system. County Code further restricts the creation of small lot subdivisions (by minimum parcel size requirements) which geographically restricts the possibilities for an onsite wastewater maintenance district. Should a proposal be submitted in the future for any onsite wastewater maintenance district and/or community type wastewater solution in a particular area, feasibility studies would have to include, as project alternatives, consideration of such formation in accordance within the provisions of Health and Safety Code.

9.2.8 Mendocino County does not anticipate developing or implementing a Regional Salt and Nutrient Management Plan. Mendocino County will consider collaborating with regional efforts on a plan if asked to participate in the future.

9.2.9 The County will work with the Resource Conservation District, which conducts watershed activities in the area, to determine if their activities identify any septic system issues near local water ways or issues specifically pertaining to the draft Russian River TMDL.

9.2.10 The LAMP includes procedures for evaluating the proximity of public sewer systems to new or replacement OWTS installations (See County Code Sections 16.12-16.16). Currently sewer district boundaries are mapped and if a property is close to a boundary, staff will consult with the district prior to issuance of any permits. Parcels within designated service areas will not be issued a permit until or unless the district issues a waiver based on specific conditions (see County Code Chapter 13.20).

9.2.11 The County will notify the owner of a public water system/NCRWQCB prior to issuing an installation permit for any new, replacement, or repair OWTS in such cases that the OWTS is; within 1200 feet of an intake point for a surface water treatment plant for drinking water, is in the drainage area catchment in which the intake point is located, and is located such that it may impact water quality at the intake point such as upstream of the intake point for a flowing water body, or if the OWTS is within a horizontal sanitary setback from a public well. Mendocino County staff will record GPS data for such systems.

9.2.12 The LAMP outlines policies and procedures to be followed when a proposed OWTS dispersal area is within the horizontal sanitary setback of a public well or a surface water intake point. These policies and procedures establish best available technology and siting practices which shall mitigate the potential adverse impact to the public water source (County Code section 13.28.040 and 13.32.050).

New or replacement OWTS shall meet a minimum horizontal setback of 150 feet from a public water well where the depth of the effluent dispersal system does not exceed 10 feet in depth. Mendocino County does not allow any OWTS with effluent dispersal deeper than 10 feet.

For replacement OWTS that do not meet the above horizontal separation requirements, the replacement OWTS shall meet the horizontal separation to the greatest extent practicable. In such case, the replacement OWTS shall utilize supplemental treatment and other mitigation measures, unless the permitting authority finds that there is no indication that the previous system is adversely affecting the public water source, and there is limited potential that the replacement system could impact the water source based on topography, soil depth, soil texture, and groundwater separation

For new OWTS, installed on parcels of record existing at the time of the effective date of this Policy that cannot meet the 150 horizontal setback to a public water supply, the OWTS shall meet the horizontal separation to the greatest extent practicable and shall utilize supplemental treatment which may include disinfection for pathogens and other mitigation measures as described in the LAMP and County Code Chapter 13.32.

9.2.13 Cesspools are not permitted in Mendocino County and any Cesspool discovered shall be properly abandoned and a repair or replacement system installed as soon as practicable.

9.3 MANAGEMENT RESPONSIBILITIES FOR LAMP

9.3.1 Records Maintenance

9.3.2 Water Quality Assessment

Inspection data. All ASTS systems are inspected by either a service provider, fore department, or County staff. Information from the inspections is maintained the Environmental Health Access Database as well as the State CERS database. Should a site fail an inspection the site will be identified in the annual report.

Complaints. All complaints are currently logged into the Environmental Health Access Database. As a part of the LAMP all complaints will be reported to the RWQCB in the annual reports. Upon receipt of a complaint in investigation will be conducted and a permit may be issued for a repair or replacement.

Failures. There are several ways in which a failure is identified. Property owners may hire a contractor to or site evaluator to works with the county on a repair. In other cases failures may be identified as a result a complaint received. All repair permits issued will be maintained in the Environmental Health Access Database as well as associated complaints.

Monitoring Well Sampling. There is currently no County sampling of monitoring wells in addition to those required by the RWQCB. There are currently no plans to conduct County sampling of monitoring wells. All sampling reports are available on the States Geotracker site.

State Small Water Systems. Currently the County performs the inspections of all State Small Water Systems. A quarterly water sample is taken at each inspection for total fecal coliform as well as E.coli. The other quarter sampling results are also reviewed during each inspection. When a sample is positive for either Environmental Health log the violation and include this information in the annual report.

State Maintained Databases. The RWQCB has stated that they will make available additional datasets that the State maintains. This will include the GAMA and Drinking Water Program databases in addition to Geotracker. The County will utilize this additional information as needed.

Domestic Well Sampling including new well development. Currently domestic well sampling occurs during the subdivision process or when new water source is added to a State Small Water System. There is current legislation that may require additional testing that will be incorporated into the County LAMP.

Real estate transactions. No information is captured at this time and there are no plans to require this in the future.

Ocean Beach Monitoring. The County currently performs Ocean Beach Monitoring from April 1st to October 31st. The data collected from this program will be submitted in the annual report as well as utilized in the five year assessments.

In the future it is the intention of the County to maintain a GIS layer for LAMP Monitoring program with in a data management program. No such program currently exists, but as the technologies become available GIS layers for all permits issued and sampling data will be utilized.

9.3.3 Annual Reporting Process

An annual report shall be submitted to the NCRWQCB no later than February 1st of each year. This report will summarize the following items:

1. All housing, water, or septic complaints Environmental Health received with locations and status.
2. Applications and permits issued to Septage Pumping operators.
3. New and Replacement Permits issued by location and status.
4. All Variance and or Repairs Shall be identified with location and justification.
5. Water Quality Assessment Program data shall be submitted annually.

The five year water quality assessment report. Every 5 years the annual report will be accompanied by water quality assessment evaluation report that summarizes the information and findings. The report will provide an analysis of any evidence of water quality impacts from OWTS as well as any appropriate changes to the LAMP developed to address the identified impacts.

The RWQCB is expecting to issue a guidance document o how this information should be gathered and organized for submittal. Upon receipt of this guidance document all pertinent requirement will be incorporated into this section of the LAMP. The being said it is understood that any water quality data generated or collected by the County from monitoring activities will be submitted in a an electronic data format as requires.

9.4 Prohibitions

- 9.4.1** Projected flows greater than 10,000. The Mendocino County LAMP applies to OWTS producing flows of less than ten thousand (10,000) gallons per day. If the proposed flow is greater than ten thousand (10,000) gallons per day or the project involves high strength waste the method of treatment and disposal

shall be approved by the NCRQWCB. All mobile home parks will come under the jurisdiction of the NCRWCB. The County reserves the right to accept projects on a case by case basis while working with the NCRWQCB.

- 9.4.2** Cesspools. Cesspools are not permitted for new construction in Mendocino County. Any Cesspool discovered shall be properly abandoned and a repair or replacement system installed as soon as practicable.
- 9.4.3** Pit Privies. Pit Privies are not permitted for new construction in Mendocino County. Any Pit Privies discovered shall be properly abandoned and a repair or replacement system installed as soon as practicable.
- 9.4.4** Holding Tanks. The use of holding tanks shall be prohibited except where the County determines that:
1. It is necessary to abate an existing nuisance or health hazard; or
 2. The proposed use is within a sewer service area, sewers are under construction or contracts have been awarded and completion is expected within two years, there is capacity at the wastewater treatment plant and the sewer agency will assume responsibility for maintenance of the tanks; or
 3. It is for use at a campground or similar temporary public facility where a permanent sewage disposal system is not necessary or feasible and maintenance is performed by a public agency.
- 9.4.5** OWTS with surface discharge. Mendocino County will NOT allow any surface discharge of sanitary wastewater. All proposed surface disposal of sanitary effluent shall be under the jurisdiction of the NCRWQCB.
- 9.4.6** Supplemental treatment without Monitoring and Inspection is not allowed. All systems with supplemental treatment (Non-Standard) require annual permitting and monitoring as well as inspection by either a service provider or County or both (Mendocino County Code Sec. 16.08.090).
- 9.4.7** Significant Waste from R.V. Holding Tanks. Mendocino County defines domestic wastewater to include only incidental RV holding tank dumping but does not include wastewater consisting of a significant portion of RV holding tank wastewater such as a RV dump station.
- 9.4.8** Installations near existing sewers. For any property where the installation of a new, expanded or replacement OWTS is proposed, Mendocino County Code Section 16.12 and 16.16 require connection to a public sewer when the nearest building proposed on any lot or parcel is no more than 200' from a public sewer and will not require the installation of a pump station which is not maintained by the sewer district. Upon the creation of new State permitted sanitation districts it is assumed that any development within 200' of the district will require connection to that sanitation district.

- 9.4.9** Supplemental Treatment, New OWTS That Do Not Meet Minimum Setback Requirements. For new OWTS on parcels created prior to the effective date of the LAMP that are unable to meet the horizontal setback requirements of 9.4.10.1- 9.4.10.5, the new dispersal field shall meet the setback requirements to the greatest extent practicable. Per County Code Chapter 13.32, an alternative sewage treatment system with supplemental treatment shall be required and shall be sited to meet the required setback to the maximum extent possible. Supplemental treatment with disinfection may be required when deemed necessary by the administrative authority for protection of the water supply. In no case shall a new sewage system that is a result of new construction be installed any closer than 100 feet to a public water supply well or public surface water intake point.
- 9.4.10** The replacement dispersal field shall meet the setback requirements to the greatest extent practicable as set forth in County Code Chapter 13.32 and shall incorporate supplemental treatment and other measures, as appropriate, unless there is no evidence of an existing or potential threat of impact to the public water source by the OWTS based on topography, soil depth and composition, and ground water conditions. When the established horizontal setbacks cannot be met, in no case shall a repair sewage system be installed any closer than the existing system to a public water supply well or public surface water intake point.
- 9.4.10** Minimum setbacks identified in 9.4.10 (9.4.10.1-9.4.10.5 and County Code Table 13.28.040) shall be maintained unless authorized through the repair/variance process (9.4.11, 9.4.12 and Mendocino County Code Chapter 13.32).
- 9.4.11** Sizing reduction and decreased leaching area for International Association of Plumbing and Mechanical Officials (IAPMO) certified dispersal systems using a multiplier less than 0.70 not allowed. (Mendocino County OWTS Technical Standards).
- 9.4.12** Installations on slopes greater than 30% are prohibited without a registered professional's report or approval from the Division of Environmental Health (Mendocino County OWTS Technical Standards).

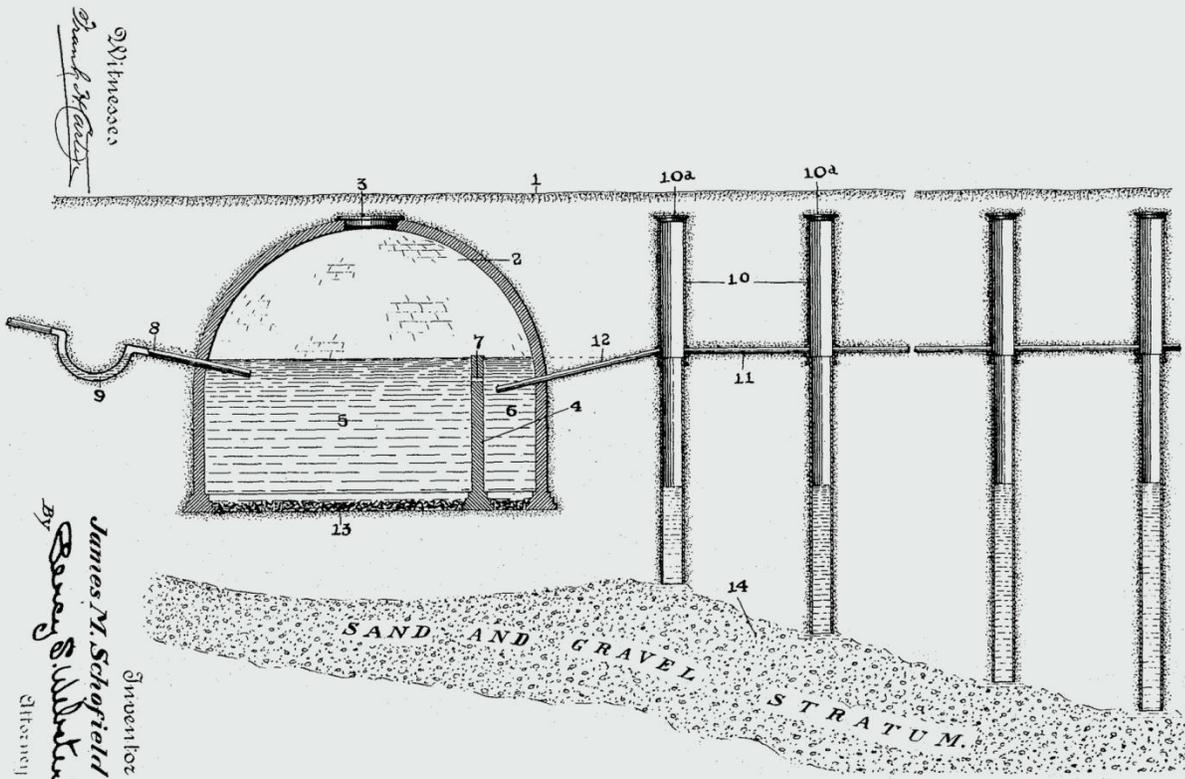
9.5 Technical Support of LAMP. The LAMP including all technical documents includes adequate detail, to support how all the criteria in this local program work to protect water quality and public health.

9.6 The NCRWQCB will consider past performance of local programs to protect water quality based on reviews of annual status and evaluation reports. Should deficiencies be identified, the County and the NCRWQCB will work together to make programmatic improvements.

933,121.

J. M. SCHOFIELD.
ODORLESS SEWER SYSTEM.
APPLICATION FILED SEPT. 8, 1908.

Patented Sept. 7, 1909.



OWTS POLICY

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

June 19, 2012



STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS



State of California
Edmund G. Brown Jr., Governor



California Environmental Protection Agency
Matthew Rodriguez, Secretary



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

Preamble – Purpose and Scope – Structure of the Policy

Preamble

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

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

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

Purpose and Scope of the Policy

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

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

Preamble – Purpose and Scope – Structure of the Policy

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

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

Structure of the Policy

This Policy is structured into ten major parts:

Definitions

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

[\[Section 1\]](#)

Responsibilities and Duties

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

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

Tier 0 – Existing OWTS

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

[\[Section 6\]](#)

Tier 1 – Low-Risk New or Replacement OWTS

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

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

Tier 2 – Local Agency Management Program for New or Replacement OWTS

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

Preamble – Purpose and Scope – Structure of the Policy

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

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

[\[Section 9\]](#)

Tier 3 – Impaired Areas

Existing, new, and replacement OWTS that are near impaired water bodies may be addressed by a TMDL and its implementation program, or special provisions contained in a Local Agency Management 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 specific requirements of Tier 3.

[\[Section 10\]](#)

Tier 4 – OWTS Requiring Corrective Action

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

[\[Section 11\]](#)

Conditional Waiver of Waste Discharge Requirements

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

[\[Section 12\]](#)

Effective Date

When this Policy becomes effective.

[\[Section 13\]](#)

Financial Assistance

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

[\[Section 14\]](#)

Preamble – Purpose and Scope – Structure of the Policy

[Attachment 1](#)

AB 885 Regulatory Program Timelines.

[Attachment 2](#)

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

[Attachment 3](#)

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

What Tier Applies to my OWTS?

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

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

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

Preamble – Purpose and Scope – Structure of the Policy

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

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

Definitions

1.0 Definitions. The following definitions apply to this Policy:

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

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

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

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

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

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

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

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

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

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

Definitions

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

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

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

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

“EDF” see “electronic deliverable format.”

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

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

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

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

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

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

Definitions

- “High-strength wastewater”** means wastewater having a 30-day average concentration of biochemical oxygen demand (BOD) greater than 300 milligrams-per-liter (mg/L) or of total suspended solids (TSS) greater than 330 mg/L or a fats, oil, and grease (FOG) concentration greater than 100 mg/L prior to the septic tank or other OWTS treatment component.
- “IAPMO”** means the International Association of Plumbing and Mechanical Officials.
- “Impaired Water Bodies”** means those surface water bodies or segments thereof that are identified on a list approved first by the State Water Board and then approved by US EPA pursuant to Section 303(d) of the federal Clean Water Act.
- “Local agency”** means any subdivision of state government that has responsibility for permitting the installation of and regulating OWTS within its jurisdictional boundaries; typically a county, city, or special district.
- “Major repair”** means either: (1) for a dispersal system, repairs required for an OWTS dispersal system due to surfacing wastewater effluent from the dispersal field and/or wastewater backed up into plumbing fixtures because the dispersal system is not able to percolate the design flow of wastewater associated with the structure served, or (2) for a septic tank, repairs required to the tank for a compartment baffle failure or tank structural integrity failure such that either wastewater is exfiltrating or groundwater is infiltrating.
- “Mottling”** means a soil condition that results from oxidizing or reducing minerals due to soil moisture changes from saturated to unsaturated over time. Mottling is characterized by spots or blotches of different colors or shades of color (grays and reds) interspersed within the dominant color as described by the USDA soil classification system. This soil condition can be indicative of historic seasonal high groundwater level, but the lack of this condition may not demonstrate the absence of groundwater.
- “Mound system”** means an aboveground dispersal system (covered sand bed with effluent leachfield elevated above original ground surface inside) used to enhance soil treatment, dispersal, and absorption of effluent discharged from an OWTS treatment unit such as a septic tank. Mound systems have a subsurface discharge.
- “New OWTS”** means an OWTS permitted after the effective date of this Policy.
- “NSF”** means NSF International (a.k.a. National Sanitation Foundation), a not for profit, non-governmental organization that develops health and safety standards and performs product certification.
- “Oil/grease interceptor”** means a passive interceptor that has a rate of flow exceeding 50 gallons-per-minute and that is located outside a building. Oil/grease interceptors are used for separating and collecting oil and grease from wastewater.

Definitions

“Onsite wastewater treatment system(s)” (OWTS) means individual disposal systems, community collection and disposal systems, and alternative collection and disposal systems that use subsurface disposal. The short form of the term may be singular or plural. OWTS do not include “graywater” systems pursuant to Health and Safety Code Section 17922.12.

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

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

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

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

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

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

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

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

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

“Qualified professional” means an individual licensed or certified by a State of California agency to design OWTS and practice as professionals for other associated reports, as allowed under their license or registration. Depending on the work to be performed and various licensing and registration requirements, this may include an individual who possesses a registered environmental health specialist certificate or is currently licensed as a professional engineer or professional geologist. For the purposes of performing site evaluations, Soil Scientists certified by the Soil Science Society of America are considered qualified professionals. A local agency may modify this definition as part of its Local Agency Management Program.

Definitions

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

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

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

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

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

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

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

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

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

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

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

Definitions

“Soil” means the naturally occurring body of porous mineral and organic materials on the land surface, which is composed of unconsolidated materials, including sand-sized, silt-sized, and clay-sized particles mixed with varying amounts of larger fragments and organic material. The various combinations of particles differentiate specific soil textures identified in the soil textural triangle developed by the United States Department of Agriculture (USDA) as found in Soil Survey Staff, USDA; *Soil Survey Manual, Handbook 18*, U.S. Government Printing Office, Washington, DC, 1993, p. 138. For the purposes of this Policy, soil shall contain earthen material of particles smaller than 0.08 inches (2 mm) in size.

“Soil Structure” means the arrangement of primary soil particles into compound particles, peds, or clusters that are separated by natural planes of weakness from adjoining aggregates.

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

“State Water Board” is the State Water Resources Control Board

“Supplemental treatment” means any OWTS or component of an OWTS, except a septic tank or dosing tank, that performs additional wastewater treatment so that the effluent meets a predetermined performance requirement prior to discharge of effluent into the dispersal field.

“SWAMP” means Surface Water Ambient Monitoring Program and more information is available at: http://www.waterboards.ca.gov/water_issues/programs/swamp/

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

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

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

“USDA” means the U.S. Department of Agriculture.

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

Responsibilities and Duties

Responsibilities and Duties

2.0 OWTS Owners Responsibilities and Duties

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

Responsibilities and Duties

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

3.0 Local Agency Requirements and Responsibilities

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

Responsibilities and Duties

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

4.0 Regional Water Board Functions and Duties

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

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

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

Responsibilities and Duties

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

Responsibilities and Duties

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

5.0 State Water Board Functions and Duties

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

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

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

Tier 0 – Existing OWTS

Tier 0 – Existing OWTS

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

6.0 Coverage for Properly Operating Existing OWTS

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

Tier 1 – Low Risk New or Replacement OWTS

Tier 1 – Low Risk New or Replacement OWTS

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

7.0 Minimum Site Evaluation and Siting Standards

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

Tier 1 – Low Risk New or Replacement OWTS

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

Tier 1 – Low Risk New or Replacement OWTS

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

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

8.0 Minimum OWTS Design and Construction Standards

8.1 OWTS Design Requirements

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

Tier 1 – Low Risk New or Replacement OWTS

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

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

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

Tier 1 – Low Risk New or Replacement OWTS

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

Tier 1 – Low Risk New or Replacement OWTS

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

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

Tier 1 – Low Risk New or Replacement OWTS

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

8.2 OWTS Construction and Installation

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

Tier 1 – Low Risk New or Replacement OWTS

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

Tier 2 – Local Agency OWTS Management Program

Tier 2 – Local Agency OWTS Management Program

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

9.0 Local Agency Management Program for Minimum OWTS Standards

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

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

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

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

Tier 2 – Local Agency OWTS Management Program

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

Tier 2 – Local Agency OWTS Management Program

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

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

Tier 2 – Local Agency OWTS Management Program

- 9.3.2 Maintain a water quality assessment program to determine the general operation status of OWTS and to evaluate the impact of OWTS discharges, and assess the extent to which groundwater and local surface water quality may be adversely impacted. The focus of the assessment should be areas with characteristics listed under section 9.1. The assessment program will include monitoring and analysis of water quality data, review of complaints, variances, failures, and any information resulting from inspections. The assessment may use existing water quality data from other monitoring programs and/or establish the terms, conditions, and timing for monitoring done by the local agency. At a minimum this assessment will include monitoring data for nitrates and pathogens, and may include data for other constituents which are needed to adequately characterize the impacts of OWTS on water quality. Other monitoring programs for which data may be used include but are not limited to any of the following:
- 9.3.2.1. Random well samples from a domestic well sampling program.
 - 9.3.2.2. Routine real estate transfer samples if those are performed and reported.
 - 9.3.2.3. Review of public system sampling reports done by the local agency or another municipality responsible for the public system.
 - 9.3.2.4. Water quality testing reports done at the time of new well development if those are reported.
 - 9.3.2.5. Beach water quality testing data performed as part of Health and Safety Code Section 115885.
 - 9.3.2.6. Receiving water sampling performed as a part of a NPDES permit.
 - 9.3.2.7. Data contained in the California Water Quality Assessment Database.
 - 9.3.2.8. Groundwater sampling performed as part of Waste Discharge Requirements.
 - 9.3.2.9. Groundwater data collected as part of the Groundwater Ambient Monitoring and Assessment Program and available in the Geotracker Database.
- 9.3.3 Submit an annual report by February 1 to the applicable Regional Water Board summarizing the status of items 9.3.1 through 9.3.2 above. Every fifth year, submit an evaluation of the monitoring program and an assessment of whether water quality is being impacted by OWTS, identifying any changes in the Local Agency Management Program that will be undertaken to address impacts from OWTS. The first report will commence one year after approval of the local agency's Local Agency Management Program. In addition to summarizing monitoring data collected per 9.3.2 above, all groundwater monitoring data generated by the local agency shall be submitted in EDF format for inclusion into

Tier 2 – Local Agency OWTS Management Program

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

- 9.4 The following are not allowed to be authorized in a Local Agency Management Program:
- 9.4.1 Cesspools of any kind or size.
 - 9.4.2 OWTS receiving a projected flow over 10,000 gallons per day.
 - 9.4.3 OWTS that utilize any form of effluent disposal that discharges on or above the post installation ground surface such as sprinklers, exposed drip lines, free-surface wetlands, or a pond.
 - 9.4.4 Slopes greater than 30 percent without a slope stability report approved by a registered professional.
 - 9.4.5 Decreased leaching area for IAPMO certified dispersal systems using a multiplier less than 0.70.
 - 9.4.6 OWTS utilizing supplemental treatment without requirements for periodic monitoring or inspections.
 - 9.4.7 OWTS dedicated to receiving significant amounts of wastes dumped from RV holding tanks.
 - 9.4.8 Separation of the bottom of dispersal system to groundwater less than two (2) feet, except for seepage pits, which shall not be less than 10 feet.
 - 9.4.9 Installation of new or replacement OWTS where public sewer is available. The public sewer may be considered as not available when such public sewer or any building or exterior drainage facility connected thereto is located more than 200 feet from any proposed building or exterior drainage facility on any lot or premises that abuts and is served by such public sewer. This provision does not apply to replacement OWTS where the connection fees and construction cost are greater than twice the total cost of the replacement OWTS and the local agency determines that the discharge from the OWTS will not affect groundwater or surface water to a degree that makes it unfit for drinking or other uses.
 - 9.4.10 Except as provided for in sections 9.4.11 and 9.4.12, new or replacement OWTS with minimum horizontal setbacks less than any of the following:
 - 9.4.10.1 150 feet from a public water well where the depth of the effluent dispersal system does not exceed 10 feet in depth.
 - 9.4.10.2 200 feet from a public water well where the depth of the effluent dispersal system exceeds 10 feet in depth.
 - 9.4.10.3 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.

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

Tier 3 – Impaired Areas

Tier 3 – Advanced Protection Management Programs for Impaired Areas

Existing, new, and replacement OWTS that are near impaired water bodies may be addressed by a TMDL and its implementation program, or special provisions contained in a Local Agency Management 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

Tier 3 – Impaired Areas

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:

Tier 3 – Impaired Areas

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

Tier 3 – Impaired Areas

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

Tier 3 – Impaired Areas

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

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

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

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

10.8 In the absence of an adopted TMDL implementation plan or Local Agency Management 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.

Tier 3 – Impaired Areas

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

Tier 3 – Impaired Areas

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

Tier 4 – OWTS Requiring Corrective Action

Tier 4 – OWTS Requiring Corrective Action

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

11.0 Corrective Action for OWTS

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

Tier 4 – OWTS Requiring Corrective Action

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

Waiver – Effective Date – Financial Assistance

Conditional Waiver of Waste Discharge Requirements

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

Effective Date

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

Waiver – Effective Date – Financial Assistance

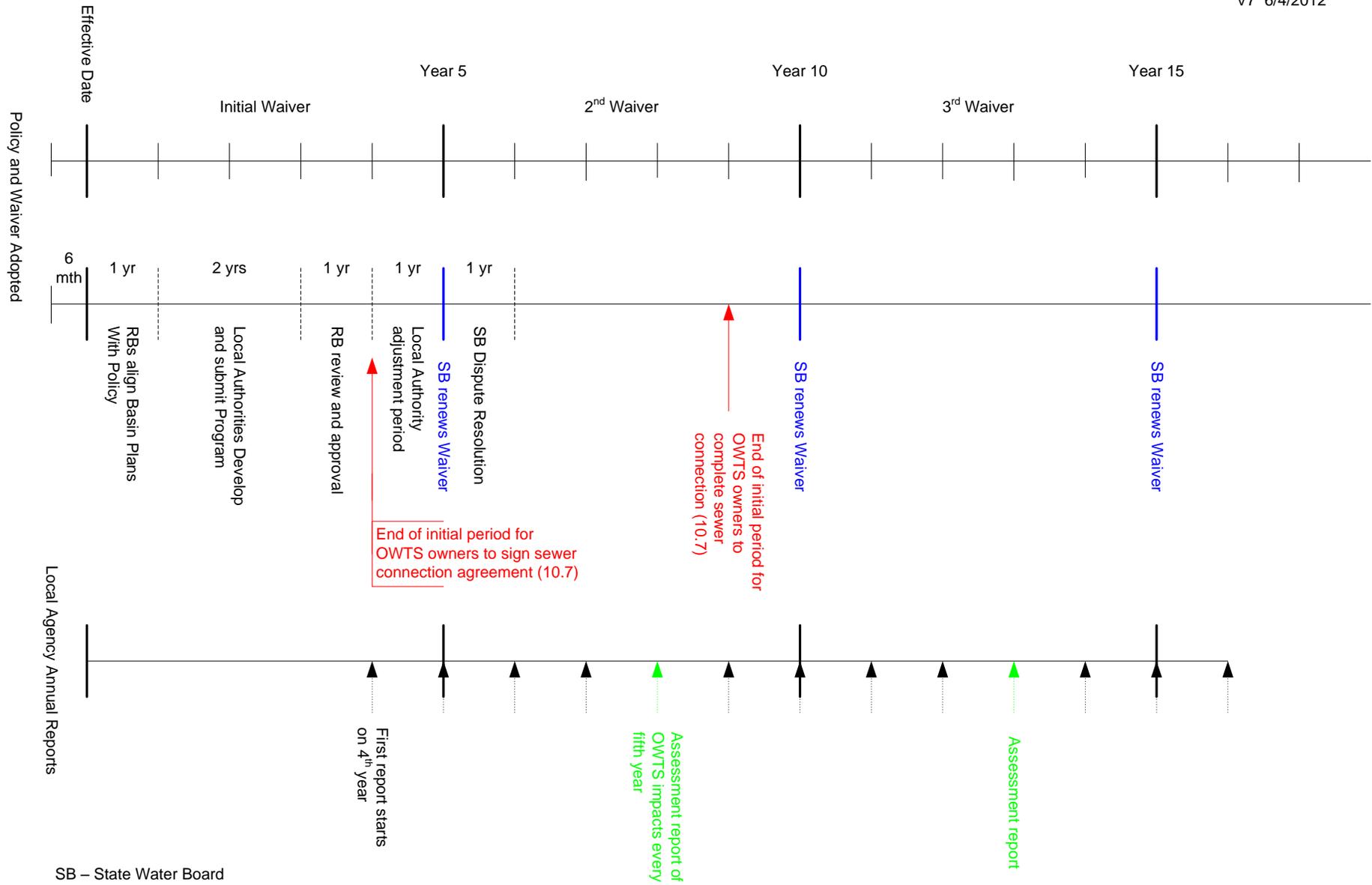
Financial Assistance

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

Attachment 1

OWTS Policy Time Lines

V7 6/4/2012



Attachment 2

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

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

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

Attachment 2

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

Attachment 2

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

Attachment 2

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

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

Attachment 3

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

Table 7. Regional Water Board designations by County.

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

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



**MENDOCINO COUNTY BOARD OF SUPERVISORS
STANDING COMMITTEE AGENDA SUMMARY**

AGENDA ITEM #2

- Agenda Summaries must be submitted no later than *noon* Thursday, 10 days prior to the meeting date (along with electronic submittals)
- Send 1 complete original single-sided set and 1 photocopy set
- Transmittal of electronic Agenda Summaries, records, and supporting documentation must be emailed to: cob@co.mendocino.ca.us
- Electronic Transmission Checklist: Agenda Summary Supp. Doc. If applicable, list other online information below

TO: Health and Human Services Committee **DATE:** April 6, 2016

FROM: Health and Human Services Agency **MEETING DATE:** May 9, 2016

DEPARTMENT RESOURCE/CONTACT: Jenine Miller **PHONE:** 472-2341 Present On Call
CEO RESOURCE/CONTACT: Doug Gherkin **PHONE:** 463-7882 Present On Call

Time Allocated for Item: 20 min.

■ AGENDA TITLE: Report from Health and Human Services Agency Regarding Current Mental Health Contracts and Subcontracts

■ PREVIOUS BOARD/BOARD COMMITTEE ACTIONS: On February 9, 2016, the Board of Supervisors requested a report of all existing contracts for mental health services, including Administrative Service Organization (ASO) contracts and subcontracts, and referred the item to the Health and Human Services (HHS) Standing Committee. On April 11, 2016, the HHS Standing Committee received a report from Health and Human Services Agency (HHSA) staff with the requested information.

■ SUMMARY OF REFERRAL: This item was initially referred to the Health and Human Services (HHS) Standing Committee by the Board of Supervisors to allow for Health and Human Services Agency (HHSA) to clarify and report on existing contracts for mental health services, including Administrative Service Organization (ASO) contracts with Ortner Management Group (OMG) and Redwood Quality Management Company (RQMC), as well as related ASO subcontracts.

On April 11, 2016, HHSA provided a report to the HHS Standing Committee on the ASO contracts and subsequent amendments for mental health services. The report lists individual contractors, service(s) provided, and contract amounts. The report is separated into the following categories:

1. HHSA Mental Health contracts for 2015/16, excluding OMG and RQMC contracts and related amendments;
2. Ortner Management Group subcontracts for 2015-16;
3. Redwood Quality Management Company subcontracts for 2015-16;
4. All ASO contracts and contract amendments since the inception of ASO contracts in 2013.

At the request of Supervisor McCowen, HHSA has revised Section 4 to include three year totals for all ASO contracts and contract amendments since inception in 2013. Additionally, Section 1 has been revised to exclude HHSA's Substance Use Disorder Treatment contracts.

- SUPPLEMENTAL INFORMATION AVAILABLE ONLINE AT:** N/A
- ADDITIONAL INFORMATION ON FILE WITH THE CLERK OF THE BOARD (CHECKED BY COB IF APPLICABLE):**

FISCAL IMPACT:			
Source of Funding	Current F/Y Cost	Annual Recurring Cost	Budgeted in Current F/Y
N/A	N/A	N/A	Yes <input type="checkbox"/> No <input type="checkbox"/>

■ SUPERVISORIAL DISTRICT: 1 2 3 4 5 All

■ RECOMMENDATION: Receive the updated report from Health and Human Services Agency regarding current mental health contracts and subcontracts, discuss, and provide direction to staff.

■ CEO REVIEW (NAME): Jill Martin, DCEO **PHONE:** 463-4441

COMMITTEE ACTION Yes No **ACTION:** _____

HSA Mental Health Contracts

2015-16

CONTRACTOR	SERVICES	AMOUNT
Barnett, Chris, M.D.	Psychiatry Services	\$ 48,000
California Psychiatric Transitions, Inc.	Residential treatment for mentally ill adults	\$ 50,000
Communique Interpreting, Inc.	Translation/sign for hearing impaired clients	\$ 11,500
Consolidated Tribal Health	Mental Health Services; outreach	\$ 40,000
Dimension Reports, LLC	Data	\$ 23,000
Dimension Reports, LLC	Data report/oversight of E.H.R.	\$ 23,000
Ernst, Gary	Fiscal Consultation Services	\$ 49,000
Family Service Agency of Marin - Division of Buckelew Programs	Suicide prevention	\$ 18,000
Fantulin, Cathy, R.N.	Nursing services	\$ 11,340
Fantulin, Cathy, R.N.	Advocacy for consumers of mental health services in hospitals, skilled nursing facilities, board and care homes, day programs	\$ 13,660
Garratt, John, M.C.	Psychiatric	\$ 50,000
Helios Healthcare	Residential facility for Mental Health clients	\$ 45,666
Holden, James	Inmate Restoration of Competency program consultation	\$ 5,000
Holden, James	Inmate Restoration of Competency program consultation & LPS eval	\$ 4,550
Holden, James	Inmate Restoration of Competency program consultation & LPS eval	\$ 15,425
Jones, Margie	Trial competency restoration training	\$ 12,000
Lakeside Special Care Center	Residential Treatment for mentally ill adults	\$ 11,390
Mendocino Coast Hospitality Center, PATH	Case Mgt and housing assistance for Severely Mentally Disabled	\$ 20,000
Moore, Deborah	Trial competency restoration training	\$ 4,000
NetSmart Technologies, Inc.	Systems assessment for electronic health records and billing	\$ 15,000
Redwood Community Services (Redwood Children's Crisis Center- RC3)	Crisis response and outreach	\$ 27,274
Redwood MedNet	Electronic health data gateway for RQMC billing claims	\$ 12,600
XPIO (CWS)	Clinical work station	\$ 39,375
XPIO (CWS) Amendment 1	Clinical work station; term date extension	\$ *
XPIO Amendment 1	Increase funding, scope and term	\$ 20,000
XPIO Amendment 2	Increase funding, scope and term	\$ 7,785
TOTAL		\$ 577,565

Ortner Management Group Subcontracts
2015-16

Contractor	Services	Amount
Davis Guest House	Adult residential and rehabilitation facility	\$34,675
Integrated Care Management Solutions	Access and Crisis Services	\$1,800,000
Mendocino County AIDS/Viral Hepatitis Network	Care Management Services	Information requested
Manzanita Services	Mental Health services in accordance with the requirements of Title 9	\$350,000
Mendocino Coast Hospitality Center	Mental Health services in accordance with the requirements of Title 9	\$310,000
North Valley Behavioral Health, LLC	Mental Health services in accordance with the requirements of Title 9	\$1,157,875
Nuestra Alianza de Willits	Services for clients 18 years and older	\$20,000
Redwood Coast Seniors	Senior peer counseling	\$31,788
RESTPADD, INC	Mental Health Services	\$60,590
South Coast Seniors	Mental Health Education for Seniors	\$4,800
Ukiah Senior Center	senior peer counseling	\$25,000
Willow Glen Care Center	Adult residential and rehabilitation facility	\$1,702,725
Total		\$5,497,453
*ICMS sub-contracts:		
Cathy Fantulin	Patient Care and Supervision	\$27 per hour
Jay Holden	Lanterman-Petris-Short conservatorship court proceedings	\$35,900
John Garratt	Medication Evaluation and Assessment	\$150 per hour
Kathryn Bernsdorf	Mental Health Care Management, Case management	\$36 per hour
Rita Gill	Medication Evaluation and Assessment	\$95 per hour
Tim Jackinsky	Medication Evaluation and Assessment	\$95 per hour

*HHSA does not have ICMS sub-contract expenditure totals.

Redwood Quality Management Company Subcontracts
2015-16

Contractor	Services	Amount
Redwood Community Services, RQM-001A	Medi-Cal Specialty Mental Health Services for MC beneficiaries ages 0-24	\$4,800,000
Tapestry FamilyServices, RQM-002A	Medi-Cal Specialty Mental Health Services for MC beneficiaries ages 0-20	\$2,300,000
Mendocino County Youth Project RQM-003A	Medi-Cal Specialty Mental Health Services for MC beneficiaries ages 0-24	\$400,000
Victor Treatment Center RQM-004A	Medi-Cal Specialty Mental Health Services for MC beneficiaries ages 0-20 placed out of county	\$4,000
Summitview Child and Family Services, RQM 005A	Medi-Cal Specialty Mental Health Services for MC beneficiaries ages 0-20 placed out of county	\$30,000
Remi Vista Inc, RQM-010A	Medi-Cal Specialty Mental Health Services for MC beneficiaries ages 0-20 placed out of county	\$30,000
Manzanita Services Inc., RQM-011A	Medi-Cal Mental Health Services for MC beneficiaries ages 18-24	\$5,000
Mendocino Coast Hospitality Center, RQM-012A	Medi-Cal Mental Health Services for MC beneficiaries ages 18-24	\$5,000
Mendocino County AIDS/Viral Hepatitis Network (MCAVHN), RQM-013A	Medi-Cal Mental Health Services for MC beneficiaries ages 18-24	\$5,000
Milhous, RQM-015A	Medi-Cal Specialty Mental Health Services for MC beneficiaries ages 0-20 placed out of county	\$150,000
Stepping Stones, RQM-001M	Mental Health Services Act Community Services and supports services for MC transitional age youth	\$200,000
Redwood Community Crisis Center (RC3), RQM-002M		\$160,000
Arbor Youth Resource Center, RQM-003M	Mental Health Services Act Community Services and supports services and Prevention and Early Intervention Services for MC children, youth and young adults	\$95,000
Tapestry FamilyServices, RQM-004M	Mental Health Services Act services for MC children, youth and young adults ages 0-20	\$65,000

Contractor	Services	Amount
Mendocino County Youth Project, RQM-005A	Mental Health Services Act Prevention and Early intervention services for Mendocino County children, youth and young adults ages 0-24	\$150,000
Action Network, RQM-008M	Mental Health Services Act Community Services and Supports and Prevention and Early Intervention Services for Mendocino County children, youth and young adults and their families	\$49,250
Aurora Behavioral Healthcare, Santa Rosa, LLC RQM-002B	Specialty inpatient mental health hospitalization services for Mendocino County Beneficiaries ages 12-24	\$10,000
Total		\$8,458,250
Crestwood American River Residential, RQM-003B	Licensed residential treatment for adult mental health beneficiaries ages 18-24	\$110 per day
Crestwood Behavioral Health, RQM-004B	Licensed residential treatment for adult mental health beneficiaries ages 18-24	\$244 per day
Rest Padd Hospital, RQM-007B	Psychiatric health facility services	\$840 per day
Casa serenity, RQM-008B	Licensed residential treatment for adult mental health clients	\$60 per day

Administrative Service Organization (ASO) Contracts

Since Inception, 2013

CONTRACTOR	DATE	SERVICES	AMOUNT
Ortner Management Group	May 21, 2013	Specialty mental health services to adults over the age of 21	\$ 6,743,340
Ortner Management Group Amendment 1	June 4, 2014	Match allocation for transitional costs of Mental Health Plan, including Medi-Cal Implementation Training and Program Augmentation	\$ 0
Total Fiscal Year 13/14			\$ 6,743,340
Ortner Management Group Amendment 2	July 9, 2014	Provide services for clients 25 years and older	\$ 0
Ortner Management Group Amendment 3	April 14, 2015	Update Exhibit B	\$ 0
Total Fiscal Year 14/15			\$ 6,743,340
Ortner Management Group Amendment 4	July 28, 2015	Extend Term	\$ 0
Ortner Management Group Amendment 5	July 7, 2015	\$5,171,966 base match allocation with a maximum agreement amount of \$7,600,000 (Exhibits A&B)	\$ 7,600,000*
Ortner Management Group Amendment 6	October 23, 2015	Update Exhibit A and B	\$ 0
Ortner Management Group Amendment 7	April 5, 2016	Expand services through Nuestra Alianza de Willits for services to Latinos (Exhibit B)	\$ 20,000
Ortner Management Group Amendment 8	In Progress		\$ 0
Total Fiscal Year 15/16 (to-date)			\$ 7,620,000
OMG Contract Total (2013 to Present)			\$21,106,680
Redwood Quality Management Company	May 21, 2013	Deliver mental health services according to the Mental Health Plan for children & youth under the age of 21	\$ 8,844,942
Redwood Quality Management Company Amendment 1	June 4, 2014	Transition compensation for 6/1/13-6/30/15. Match allocation for transitional costs of Mental Health Plan, including Medi-Cal Implementation Training and Program Augmentation	\$ 68,000
Total Fiscal Year 13/14			\$8,912,942
Redwood Quality Management Company Amendment 2	July 9, 2014	Provide for youth and children up to the age of 25	\$ 0
Redwood Quality Management Company Amendment 3	January 8, 2015	Adjustment of the Certified Public Expenditure (CPE) distribution amount to enable contractor to request additional FFP funds	\$ 0
Redwood Quality Management Company Amendment 4	June 11, 2015	Allow \$700,000 in additional FFP payment to RQMC	\$ 700,000
Redwood Quality Management Company Amendment 5	June 17, 2015	Extend Term	\$ 0
Total Fiscal Year 14/15			\$ 9,612,942
Redwood Quality Management Company Amendment 6	July 7, 2015	\$4,871,966 base match allocation with maximum agreement amount of \$9,743,994	\$ 9,743,994*
Redwood Quality Management Company Amendment 7	April 5, 2016	Expand services through Laytonville Healthy Start FRC	\$ 35,000
Redwood Quality Management Company Amendment 8	April 5, 2016	Adjusts Early and Periodic Screening, Diagnostic and Treatment (EPSDT)	\$ 153,034
Redwood Quality	March 21, 2016	Specialty mental health services to adults over the	\$ 50,000

Management Company		age of 25 (through April 5, 2016) (TRANSITION)	
Redwood Quality Management Company	April 5, 2016	Capacity building and transitional services (April 5-June 30, 2016) (TRANSITION)	\$ 827,068
Total Fiscal Year 15/16 (to-date)			\$10,809,096
RQMC Contract Total (2013 to Present)			\$29,334,980
ASO Contracts Total (2013 to Present)			\$50,441,660

* Contract totals did not change during the first two years. Contract total changed for RQMC at the sixth Amendment. Contract total changed for OMG at the fifth Amendment.

The following are actual amounts paid to the ASOs

OMG

FY 12/13	\$ 79,754.00
FY 13/14	\$ 6,743,338.00
FY 14/15	\$ 7,379,401.16
FY 15/16	\$ 6,566,002.32
Total	\$20,768,495.48

RQMC

FY 12/13	\$ 68,000.00
FY 13/14	\$ 9,638,088.26
FY 14/15	\$ 9,207,592.50
FY 15/16	\$ 7,158,997.39 *This total includes the transition start up
Total	\$26,072,678.15

Grand Total \$46,841,173.63