MODOC ONSITE WASTEWATER TREATMENT SYSTEMS LOCAL AGENCY MANAGEMENT PROGRAM (LAMP)

MODOC COUNTY ENVIRONMENTAL HEALTH

Version 1.5.2

1/3/18

Adopted by Modoc County Board of Supervisors on 22 NOV 2016
(effective 1 JAN 2018)

Introduction

This document represents the Local Agency Management Program (LAMP) relating to the oversight of onsite wastewater treatment systems (OWTS) within the County of Modoc, California. This LAMP has been prepared in accordance with the requirements of the State Water Resources Control Board (SWRCB) Water Quality Control Policy for the siting, design, operation and maintenance of onsite wastewater treatment systems, dated June 19, 2012. This Policy describes four "Tiers" of onsite wastewater treatment system management. Tier 2 describes the requirements for developing a LAMP which when approved, becomes the standard by which authorized local agencies regulate OWTS. An approved LAMP is equivalent to a "Conditional Waiver of Waste Discharge Requirements" for OWTS within the local agency jurisdiction.

This LAMP has been prepared by Modoc County to obtain approval for OWTS management under Tier 2 of the OWTS policy. As such, it is intended to allow the County to continue providing local oversight of OWTS by implementing practices that: (1) are suited to the conditions in Modoc County; (2) meet or exceed the environmental protection of the "default" siting and design requirements for OWTS identified in Tier 1 of the SWRCB policy; and (3) ensure the best opportunity for comprehensive management of OWTS, public health and water quality in Modoc County.

Geographical Area

Modoc County is located at the far northeast area of the state. It shares boundaries with Siskiyou County to the west, Lassen County to the south, Nevada to the east, and Oregon to the north. The county encompasses 4,203 square miles of land, with a population of 9,686 (2010 census). The City of Alturas is the county seat, the largest, and only incorporated city within the county.

Regulation of OWTS and Public Education and Outreach

The Modoc County Environmental Health Department (MCEH) is responsible for regulating OWTS throughout the incorporated and unincorporated areas of the County. MCEH operates its onsite wastewater treatment program under the authority granted by three California Regional Water Quality Control Boards: (1) The Lahontan Regional Water Quality Control Board (LRWQCB) for those areas east of the Warner Mountains; and (2) The Central Valley Regional Water Quality Control Board (CVRWQCB) for those areas that drain to San Francisco Bay; and (3) The North Coast Regional Water Quality Control Board (NCRWQCB) for those areas that drain to the ocean through the Klamath watershed. According to Attachment 3 of the OWTS policy, because Modoc County is under jurisdiction of multiple Regional Boards, the CVRWQCB has been designated as the lead to review and approve this LAMP.

In addition to our regulatory role, Modoc County's LAMP includes an education and outreach program to assist homeowners with understanding what their dispersal system is and

how it functions. Operation and Maintenance manuals for OWTS will be available for all standard systems and all alternative systems will be inspected annually either by the County or the Service Provider (or both) with information from the inspection provided to the homeowner. Additionally, the County will continue to work closely with OWTS private evaluators/inspectors to compile data relevant to OWTS operation and water quality.

The LAMP consists of three parts:

Part One: Modoc County Code Chapter 13.16, Modoc County Board of Supervisors LAMP submittal and adoption resolution, and Central Valley Regional Water Quality Control Board concurrence.
Part Two: Modoc County Onsite Wastewater Treatment Systems (OWTS) Local Agency Management Plan, Permitting process, Reasoning, Statistics, and Additional Considerations.
Part Three: Regional Board LAMP compliance check list and State OWTS Policy for reference.

Parts one and two are self-explanatory. Part three addresses and references additional Tier 2 Policy requirements that are not specifically included in the Ordinance or LAMP. Altogether this LAMP meets or exceeds the intent of the Policy by providing an OWTS regulatory framework that protects public health, the environment and groundwater resources to the greatest extent practicable.
If at any time Modoc County wishes to withdraw its submitted and approved Tier 2 LAMP we will do so only upon 60 days written notice. The notice will specify the reason for withdrawing our Tier 2 program, the effective date for cessation, and resumption of permitting of OWTS only under Tiers 1 and 4.

Regards,

Warren Farnam
Director, Modoc County Environmental Health

PART 1

ADOPTED MODOC COUNTY SEWAGE DISPOSAL ORDINANCE AND RESOLUTION ADOPTING LOCAL AREA MANAGEMENT PLAN FOR SUBMITTAL TO THE CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD

204 S. Court St Alturas, CA, 96101 (530) 233-6201

Modoc County Board of Supervisors
MINUTE ORDER

The following action was taken by the Modoc County Board of Supervisors on November 22, 2016:

3.a. Ordinance: Second reading and approval of an Ordinance amending Chapter 13.04 Sewage Disposal and Industrial Waste Discharge to adjust for the Local Area Management Plan onsite waste treatment system policy.

Motion by Supervisor Byrne, seconded by Supervisor Wills to waive the second reading and approve of an Ordinance amending Chapter 13.04 Sewage Disposal and Industrial Waste Discharge to adjust for the Local Area Management Plan onsite waste treatment system policy.

Motion Approved:
RESULT: **APPROVED [UNANIMOUS]**
MOVER: Geri Byrne, Supervisor District V
SECONDER: James Wills, Supervisor District IV
AYES: David Allan, Supervisor District I, Patricia Cullins, Supervisor District II, Kathie Rhoads, Supervisor District III, James Wills, Supervisor District IV, Geri Byrne, Supervisor District V

STATE OF CALIFORNIA

COUNTY OF MODOC

I, Tiffany Martinez, Deputy Clerk to the Board of Supervisors in and for the County of Modoc, State of California, do hereby certify that the above and foregoing is a full, true and correct copy of an ORDER as appears on the Minutes of said Board of Supervisors dated November 22, 2016 on file in my office.

WITNESS my hand and the seal of the Board of Supervisors this 22nd day of November 2016.

Tiffany A. Martinez
Deputy Clerk of the Board

ORDINANCE # 173 - B

AN ORDINANCE OF THE BOARD OF SUPERVISORS
OF THE COUNTY OF MODOC
AMENDING CHAPTER 13.04 SEWAGE DISPOSAL AND INDUSTRIAL
WASTE DISCHARGE TO ADJUST FOR THE LOCAL AREA MANAGEMENT
PLAN ONSITE WASTE TREATMENT SYSTEM POLICY

The Board of Supervisors of the County of MODOC, State of California, ordains as follows:

Chapter 13.04 - SEWAGE DISPOSAL AND INDUSTRIAL WASTE DISCHARGE

13.04.005 - Declaration of findings and intent.

The Modoc County Board of Supervisors hereby determines that the secure management of sewage disposal systems is necessary to protect the public health, welfare and safety of Modoc County.

It shall be the duty of the Director of Environmental Health to implement and enforce the provisions of this chapter in all incorporated and unincorporated areas of Modoc County.

Upon adoption of this ordinance by the Modoc County Board of Supervisors and acceptance of the Modoc County Local Area Management Plan by the applicable Regional Water Quality Control Board the effective date of this ordinance will be January 1, 2018.

13.04.010 - Definitions.

For the purposes of this chapter, the following words and phrases shall have the meanings respectively ascribed to them by this section:

"Building" means any residence, place of business, or other structure where persons reside, congregate, or are employed, and which is not connected to a public or community sanitary sewer system.

"Contamination" means an impairment of the quality of the water, either surface or underground, of the county by sewage or industrial waste, to a degree which creates an actual hazard to the public health through poisoning or the spread of disease.

"Health Officer" means the appointed Health Officer of the county, and their duly authorized representative.

"Industrial Waste" means any and all liquid or solid waste substance not sewage, from any producing, manufacturing, or processing operation of whatever nature.

"Nuisance" means the overflowing of the surface of any land by sewage or industrial waste resulting from unreasonable practices in the disposal of such wastes.

"Person" means any individual, association, corporation, city, county or district.

"Pollution" means an impairment of the quality of the waters, either surface or underground, of this county by sewage or industrial waste to a degree which does not create an actual hazard to the public health, but which does adversely and unreasonably affect such waters for domestic, industrial, agricultural, recreational or other beneficial use. "Pollution" shall include any equivalent effect resulting from the disposal of sewage or industrial waste, whether or not waters of the county, either surface or underground, are affected.

"Septage" means the domestic liquid and solid sewage pumped from septic tanks, cesspools, holding tanks, vault toilets, chemical toilets, other similar domestic sewage treatment components or systems, and other sewage sludge not derived at sewage treatment plants.

"Sewage" means any and all wastes, liquid or solid, associated with human habitation, or which contain or may be contaminated with human or animal excreta or excrement, offal, or any feculent matter.

"Sewage Disposal System or Onsite Waste Treatment System" means septic tank, subsurface drain field, and accessory piping that relies on soil, vegetation and evaporation for treatment of sewage.

13.04.020 - Sanitary sewage disposal system required.

It shall be unlawful for any person to maintain, occupy or use any building not provided with a sewage disposal system which disposes of sewage in a sanitary manner.

13.04.030 - Unlawful disposal methods.

It shall be unlawful for any person to construct, maintain, or use any sewage disposal system which results in any of the following:

A. Sewage overflowing any lands whatsoever;

B. Sewage emptying, flowing, seeping or draining into any stream, spring, river, lake or other waters within the county;

C. Sewage being accessible to rodents, insects, or humans.

13.04.040 - Individual sewage disposal systems-Rules and regulations.

The Health Officer may make a local area management program (LAMP) for onsite waste treatment systems governing individual sewage disposal systems for their efficient operation and to prevent contamination, pollution, or nuisance. The LAMP shall be approved by the applicable regional water quality control board and the Modoc County Board of Supervisors by resolution.

13.04.050 - Minimum area for inhabitable parcels.

A. Each and every lot, or any parcel of land subdivided subsequent to the effective date of the ordinance codified in this chapter, for the purpose of human habitation shall meet the following requirements:

1. Where an individual sewage disposal system and individual water supply are installed, the lot shall have a minimum area of one acre.
2. Where only an individual sewage disposal system is installed, minimum area shall be one half acre.
3. Each lot shall have a soil evaluation performed and approved for an individual sewage disposal system that meets the potential use requirements.

B. The parcel size required may be adjusted if the Health Officer determines it is necessary for proper sewage disposal.

13.04.060 - Engineering data on sewage disposal feasibility required when.

The Health Officer, if his judgment deems it so necessary, may require any person to submit engineering data on any lot or parcel of land, showing the feasibility of sewage disposal and/or the installation of water supplies.

13.04.070 - Permits Required when Health Officer authorized to issue from the applicable State Regional Water Quality Control Board.

A. No person shall begin or cause to have begun construction of any building or any sewage disposal system without first submitting an application showing the means of sewage disposal to the Health Officer and obtaining a permit there from.

B. No person shall construct an auxiliary sewage disposal system for a building presently served by a sewage disposal system without first submitting plans of the proposed means of sewage disposal to the Health Officer and obtaining a permit there from.

C. No person shall extensively alter, repair, relocate, add to or replace any existing sewage disposal system without first securing a permit there from.

D. Permits issued pursuant to this section shall be valid for one year and shall automatically become void one year from the date of issuance, unless renewed prior to the expiration date. Only a single one-year renewal shall be permitted. Permits for repair, alteration, replacement or enlargement shall be valid for one year from the date of issuance and are not renewable. Any rule change by the County or applicable State Regional Water Quality Control Board shall be applied when enacted regardless of permit expiration date.

E. Applications for permits to construct sewage disposal systems shall be submitted on forms provided by the Health Officer.

F. Any changes to an approved site plan, issued in conjunction with a county permit to construct a sewage disposal system, shall first be submitted to the Health Officer for approval.

13.04.080 - Inspections-Required when Health Officer authorized.

No person shall backfill or cover with earth, or put into use any sewage disposal system constructed under provisions of this chapter until an inspection of the sewage

disposal system has been made by the Health Officer, and the permit is signed by the Health Officer acknowledging the final inspection.

13.04.090 - General septic system requirements.

A. All septic systems shall be designed and operated to reduce the risk of contamination and public nuisances.

B. Septic system components shall comply with the county approved onsite waste treatment system policy.

C. Leach area compatibility, design, and construction shall be approved by the Health Officer.

13.04.100 - Individual sewage systems.

No individual sewage disposal system or part thereof shall be located on any lot other than the lot which is the site of the building, structure or premises served by such sewage disposal system.

13.04. 110 - Liability of county.

This chapter shall not be construed as imposing upon the county any liability or responsibility for damage resulting from the defective construction of any sanitary disposal system, as herein provided; nor shall the county, or any official or employee thereof, be held as assuming any such liability or responsibility by reason of the inspection authorized thereunder.

13.04. 120 - Contamination, pollution or nuisances-Prohibited.

No person shall discharge sewage or industrial waste, or the effluent of treated sewage or industrial waste, in any manner which will result in contamination, pollution, or a nuisance.

13.04. 130 - Contamination, pollution or nuisances-Notice to abate.

Whenever the Health Officer finds that contamination, pollution, or nuisance does in fact exist, he shall serve written notice upon the owner or reputed owner of land upon which the condition does exist, ordering the owner, or reputed owner, to abate such contamination, pollution, or nuisance.

13.04. 140 - Contamination, pollution, or nuisances-Actions for relief not limited.

No provision of this chapter is a limitation on the right of any person to maintain at any time any appropriate action for relief against any private nuisance, as defined in the Civil Code, or for relief against any contamination or pollution.

13.04.150 - Septic pumper registration program.

A. All entities performing sewage pumping services within Modoc County shall be registered by the Health Officer as per California Health and Safety Code, section 117400 et al. Septage pumping registration requires the following:
   1. Health Officer approved application for registration and equipment inspection every three years.
   2. Every registrant is required to submit a septage management plan annually

at the end of each calendar year.

3. Submittal of fees for registration and equipment inspection.
4. Septage pumping and storage equipment is required to be in good working order and unlikely to cause a public health hazard.

B. Registration and equipment inspection shall be valid for three years and operate on a calendar year basis.

13.04.160 - Fees.

The amount of any fee to be paid under this chapter or the State Regional Water Quality Control Board approved county OWTS policy, shall be set forth in the Modoc County fee resolution. All fees shall be paid in the amount stated in the fee resolution at the time of permit application or service invoice. If the foundation of any building is laid, or any building structure is erected, or if construction of an auxiliary sewage disposal system for an existing building shall be begun prior to obtaining the required permit, the permit fee above specified shall be doubled, but shall not relieve any person from fully complying with the requirements of this chapter, nor from any other penalties prescribed herein.

13.04.170 - Enforcement-Right of entry.

For the enforcement of this chapter and any rule or regulation made pursuant to Section 13.04.040, the Health Officer may enter at any reasonable time any and all portions of lands within the county.

13.04.180 - Violation-Penalty.

A. The violation of any section or part of this chapter, or any rules or regulations made pursuant to Section 13.04.040, shall be deemed a misdemeanor, punishable by a fine of not more than five hundred dollars, or by imprisonment in the county jail for a period not to exceed six months.

B. Each and every day a violation exists shall constitute a separate and distinct offense.

PASSED AND ADOPTED by the Board of Supervisors of the County of Modoc, State of California, on the 22nd day of November, 2016 by the following vote:

Motion Approved:
RESULT: **APPROVED [UNANIMOUS]**
MOVER: Geri Byrne, Supervisor District V
SECONDER: James Wills, Supervisor District IV
AYES: David Allan, Supervisor District I, Patricia Cullins, Supervisor District II, Kathie Rhoads, Supervisor District III, James Wills, Supervisor District IV, Geri Byrne, Supervisor District V

Dated: November 22, 2016

COUNTY OF MODOC

Kathie Rhoads

Kathie Rhoads, Chair
Modoc County Board of Supervisors

ATTEST:

Tiffany Martinez

Tiffany Martinez,
Deputy Clerk to the Board

APPROVED AS TO FORM:

County Counsel

Ordinance 173 - B -Page 6

204 S. Court St Alturas, CA, 96101 (530) 233-6201

Modoc County Board of Supervisors
MINUTE ORDER

The following action was taken by the Modoc County Board of Supervisors on November 22, 2016:

3.b. Resolution: Requesting approval of a Resolution to adopt the Modoc County Local Agency Management Plan (LAMP) for local oversight of the onsite waste water treatment system program within Modoc County.

Motion by Supervisor Allan, seconded by Supervisor Wills to approve of a Resolution to adopt the Modoc County Local Agency Management Plan (LAMP) for local oversight of the onsite waste water treatment system program within Modoc County.

Motion Approved:
RESULT: **APPROVED [UNANIMOUS]**
MOVER: David Allan, Supervisor District I
SECONDER: James Wills, Supervisor District IV
AYES: David Allan, Supervisor District I, Patricia Cullins, Supervisor District II, Kathie Rhoads, Supervisor District III, James Wills, Supervisor District IV, Geri Byrne, Supervisor District V

STATE OF CALIFORNIA

COUNTY OF MODOC

I, Tiffany Martinez, Deputy Clerk to the Board of Supervisors in and for the County of Modoc, State of California, do hereby certify that the above and foregoing is a full, true and correct copy of an ORDER as appears on the Minutes of said Board of Supervisors dated November 22, 2016 on file in my office.

WITNESS my hand and the seal of the Board of Supervisors this 22nd day of November 2016.

Tiffany A. Martinez
Deputy Clerk of the Board

RESOLUTION # 2016-32

A RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF MODOC ADOPTING THE MODOC COUNTY LOCAL AGENCY MANAGEMENT PLAN (LAMP) FOR LOCAL OVERSIGHT OF THE ONSITE WASTE WATER TREATMENT SYSTEMS PROGRAM WITHIN MODOC COUNTY

WHEREAS, the enactment of the Porter-Cologne Water Quality Control Act in 1971 resulted in the formation of the California State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCB); and

WHEREAS, under the California Water Code, the RWQCBs are vested with the authority to require individuals or entities to obtain Waste Discharge Requirements (WDRs) from the appropriate RWQCB if such individuals or entities intend to dispose of wastewater that has the potential to pollute waters of the state, both surface and groundwater; and

WHEREAS, WDRs are designed to ensure that the beneficial uses of waters of the state are not impaired by wastewater discharges; and

WHEREAS, SWRCB has determined the subsurface discharge of effluent from onsite wastewater treatment systems (OWTS) constitutes a discharge that could affect the quality of water of the state and are therefore subject to compliance with WDRs; and

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

WHEREAS, the OWTS Policy 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; and

WHEREAS, the OWTS Policy allows local enforcement agencies to continue to implement a local program, either under the conservative, largely prescriptive low risk Tier 1 standards, or alternative, largely performance-based Tier 2 standards in a Local Agency Management Plan (hereafter LAMP); and

WHEREAS, a local OWTS program under the Tier 1 standards would severely limit the ability of Modoc County to issue permits for new and replacement OWTS in many areas

of the county due to various site constraints and conditions, and alternate methods from Tier 1 standards are required; and

WHEREAS, the OWTS Policy allows Modoc County to propose standards for new and replacement OWTS as a Tier 2 LAMP to the Central Valley RWQCB for approval, to provide an alternate method from Tier 1 programs, the same overall level of protection of water quality and public health; and

WHEREAS, Environmental Health has reviewed the local program including procedures, handbooks and ordinances and has determined the existing local program, with modification, can meet the Tier 2 requirements of the OWTS Policy; and

WHEREAS, Environmental Health and Central Valley RWQCB staff have identified specific section of Title 13, Chapter 13.04 of Modoc County Code that must be amended to ensure this LAMP complies with the SWRCB OWTS Policy; and

WHEREAS, the Modoc County Board of Supervisors adopted amended ordinance and LAMP must be submitted to the Central Valley RWQCB for concurrence.

NOW, THEREFORE, BE IT RESOLVED by the Modoc County Board of Supervisors that the Modoc County Local Agency Management Plan is adopted and will supplement Modoc County Code Title 13, Chapter 13.04. Environmental Health is hereby authorized to submit the Tier 2 Local Agency Management Plan for new and replacement onsite wastewater treatment systems to the Central Valley Regional Water Quality Control Board. After concurrence from the Central Valley RWQCB, the Modoc County Board of Supervisors intends to ensure compliance with the SWRCB OWTS Policy prior to May 13, 2018.

PASSED AND ADOPTED by the Board of Supervisors of the County of Modoc, State of California, on the 22nd day of November, 2016 by the following vote:

Motion Approved:
RESULT: **APPROVED [UNANIMOUS]**
MOVER: David Allan, Supervisor District I
SECONDER: James Wills, Supervisor District IV
AYES: David Allan, Supervisor District I, Patricia Cullins, Supervisor District II, Kathie Rhoads, Supervisor District III, James Wills, Supervisor District IV, Geri Byrne, Supervisor District V

Resolution 2016-32-Page 3

BOARD OF SUPERVISORS
OF THE COUNTY OF MODOC

Kathie Rhoads, Chair
Modoc County Board of Supervisors

ATTEST:

Tiffany Martinez
Deputy Clerk of the Board

Resolution 2016-32-Page 3

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

RESOLUTION R5-2017-0016

APPROVING THE LOCAL AGENCY MANAGEMENT PROGRAM
FOR
MODOC COUNTY ENVIRONMENTAL HEALTH DEPARTMENT

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

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

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

WHEREAS, for counties that span multiple jurisdictions OWTS Policy designates one Regional Water Quality Control Board to regulate, but requires its staff to solicit comments from non-jurisdictional Regions; and

WHEREAS, on 25 April 2016 the Modoc County Environmental Health Department (MCEHD) submitted an informal draft LAMP, along with a preliminary completeness checklist (hereafter checklist) per staff's request; and

WHEREAS, on 3 May 2016 staff provided informal comments on the informal draft LAMP and checklist; on 12 May 2016 MCEHD submitted a formal draft LAMP that addressed staff's comments; on 17 May 2016 Central Valley Water Board staff sought DDW's comments on the formal draft; and on 2 June 2015 DDW staff concurred with proposed setbacks and notifications; and

WHEREAS, on 2 June 2016 staff solicited comments on the formal draft from the North Coast Regional Water Quality Control Board (hereafter Region 1), and the Lahontan Regional Water Quality Control Board (hereafter Region 6); Region 1 declined to comment and staff addressed informal comments from Region 6; and;

WHEREAS, on 13 December 2016, the Central Valley Water Board notified MCEHD and interested parties of its intent to approve the LAMP, and provided them with an opportunity for public hearing, and an opportunity to submit comments and recommendations, both on the LAMP and checklist; and

WHEREAS, on 24 February 2017, the Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to this action:

Therefore, be it RESOLVED, that the Central Valley Water Board hereby approves the Local Agency Management Program submitted by the Modoc County Environmental Health Department. I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a Resolution adopted by the Central Valley Water Board, on 24 February 2017.

Pamela Creedon

PAMELA C. CREEDON, Executive Officer

RESOLUTION # 2017-50

A RESOLUTION OF THE BOARD OF SUPERVISORS
OF THE COUNTY OF MODOC
UPDATING THE ENVIRONMENTAL HEALTH PROGRAM FEES

WHEREAS, the Board of Supervisors of the County of Modoc have determined that it is necessary to adjust permit fees where the present fee is not sufficient to cover the costs associated with the inspection(s) necessary to perform said inspections.

WHEREAS, in order to implement Exhibit "A" attached Environmental Health Program Fee Schedule within Modoc County, and

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of the County of Modoc, State of California, that Modoc County hereby implements Exhibit "A" the attached fee schedule, effective January 1, 2018.

PASSED AND ADOPTED by the Board of Supervisors of the County of Modoc, State of California, on the 12th day of December, 2017 by the following vote:

Motion Approved:
RESULT: **APPROVED [UNANIMOUS]**
MOVER: David Allan, Supervisor District I
SECONDER: Kathie Rhoads, Supervisor District III
AYES: David Allan, Supervisor District I, Patricia Cullins, Supervisor District II, Kathie Rhoads, Supervisor District III, Elizabeth Cavasso, Supervisor District IV, Geri Byrne, Supervisor District V

BOARD OF SUPERVISORS
OF THE COUNTY OF MODOC

Patricia Cullins, Vice-Chair
Modoc County Board of Supervisors

ATTEST:

Tiffany Martinez
Deputy Clerk of the Board

Resolution 2017-50-Page 1 of 1

MODOC COUNTY ENVIRONMENTAL HEALTH FEES

LIQUID WASTE - OWTS (Onsite Waste Treatment System)

OWTS Permit Type	OWTS System Type	
Site Evaluation	For OWTS Determination	$180
New Construction Permit		
	Standard System	$210
	Advanced Treatment System	$420
	Sand filter/ Recirculating Gravel Filter	$420
	Pressure Distribution/ Cap and Fill	$420
	Graywater System	$420
	Alternative Technology System	$420
	Holding Tank (alarm required)	$210
	Non-Water Carried System	$210
Repair Permit - Minor		
	Primary Tank or Pump Replacement	$135
Repair Permit - Major		
(Can include tank or pump)	Standard Leach Field	$165
	Advanced Treatment System	$420
	Sand filter/ Recirculating Gravel Filter	$420
	Pressure Distribution/ Cap and Fill	$420
	Alternative Technology	$420
	Graywater System	$420
	Holding Tank (alarm required)	$165
	Non Water Carried System	$135
	No Eval On File Add	$60
Alteration Permit		
	Standard Leach Field	$165
	Advanced Treatment	$420
	Alternative Technology	$420
	Graywater System	$420
	Holding Tank (alarm required)	$165
	Non Water Carried System	$135
	No Eval On File Add	$60
Authorization Permit*		
	No Site Visit Required	$30
	Site Visit Required	$120
Permit Renewal	1/3 Original Permit Fee	Org. Fee x 0.33
Permit Transfer Request	1/3 Original Permit Fee	Org. Fee x 0.33
Initial Advanced Treatment Review		Hourly Rate
Initial Alternative Technologies Review		Hourly Rate
Permitting OWTS 2,001 - 10,000 gpd		Hourly Rate
Annual Permit Fee for Sandfilter/Recirculating Gravel Filter/Adavanced Treatment Technologies		$35
Septage Disposal Three Year Registration Inspection	(Includes One Vehicle)	Hourly Rate
	Each additional Vehicle	$20
	Off Site Inspection	$60
File Existing System Evaluation Report		No Charge
Penalty For Constucting Without a Permit (Does Not Apply to an Approved Emergency Repair)		Applicable Fee/s X 3

** Fee can be applied to a repair permit fee if system requires for approval.*

Effective: 1 JAN 2018 Page 3 of 4 Resolution Number: 2017-50

PART 2

Modoc County Onsite Wastewater Treatment Systems (OWTS) Technical Standards Policy

TABLE OF CONTENTS

CONSTRUCTION STANDARDS

Tables

Attachments

1. **Annual Regional Water Quality Control Board Report – Complaints**
2. **Annual Regional Water Quality Control Board Report – Permit Activity**
3. **Annual Regional Water Quality Control Board Report – Septage Registration Program**
4. **Site Evaluation Form – Pg 1**
5. **Site Evaluation Form – Pg 2**
6. **Site Evaluation Field Form**
7. **OWTS Application Package**
    a. **Application Cover**
    b. **Existing Septic System Description**
    c. **Notice Authorizing Representative**
    d. **Test Pit Preparation for Site Evaluations**

   e. **Land Use Compatibility Statement**
   f. **Water Saving Leach Area Reduction Request**
   g. **Map Example**
   h. **Who can do what**
8. **Permit Flow Charts**
   a. **New System**
   b. **Repair**
   c. **Alteration**
   d. **Authorization**
   e. **Permit Renewal/Transfer**
9. **OWTS Standard System Configuration Handout**
10. **Cap and Fill Handout**
11. **Sewage Disposal Service Registration**
   a. **Application/Inspection Form**
   b. **Septage Management Plan Worksheet**
12. **OWTS Inspection Form for Real-estate**
13. **Modoc County OWTS Statistics**
14. **Modoc County OWTS Permit Statistics Chart**
15. **SWRCB Soil Application Rates Comparison to Modoc LAMP Table 3**
16. **Residential Water Saving Adjustment Justification**

PART 3

- **Central Valley Regional Water Quality Control Board LAMP Checklist**
- **State Water Resources Control Board Adopted OWTS Policy**

1.0 Definitions

"Absorption Area" means the entire area used for underground dispersion of the liquid portion of sewage including the area designated for a future replacement system. It may consist of a seepage pit, absorption field, or combination of the two. It may also consist of a cesspool, seepage bed, bottomless sand filter, or evapotranspiration-absorption system.
"Absorption Facility" means a system of open-jointed or perforated piping, alternative distribution units, or other seepage systems for receiving the flow from septic tanks or other treatment facilities that are designed to distribute effluent for oxidation and absorption by the soil within the zone of aeration.
"Absorption Field" means a system of absorption trenches, a seepage trench, or a system of seepage trenches.
"Absorption Trench" means a ditch or a trench installed into soil, permeable saprolite, or diggable bedrock, with vertical sides and a substantially flat bottom.
"Aerobic System" means an alternative system that incorporates a septic tank or other treatment facility, an aerobic sewage treatment facility, and an absorption facility to provide treatment before dispersal.
"Agent" means the Environmental Health Director or person authorized to act on behalf of the director who possesses a valid State of California Registered Environmental Health Specialist certificate.
"Alteration" means expansion or change in location of an existing system or any part thereof. Major alteration is the expansion or change in location of the soil absorption facility, treatment unit, or any part thereof. Minor alteration is the replacement or relocation of a septic tank or other components of the system other than the soil absorption facility, or a change in distribution technique or method.
"Alternative System" means any onsite wastewater treatment system approved by the director.
"Alternative Treatment Technologies" means an alternative system that incorporates aerobic and other treatment technologies or units not specifically described elsewhere in this policy.
"Approved Material" means construction items that have been approved for use by MCEH.
"Approved Criteria" means methods of design or construction that have been approved for use by MCEH.
"ASTM" means American Society of Testing Materials.
"Authorization Notice" means a written document issued by an agent establishing that an existing onsite wastewater treatment system appears adequate for its intended use.
"Authorized Representative" means a person with written authorization to act as another person's delegate.
"Automatic Siphon" means a hydraulic device designed to rapidly discharge the contents of a dosing tank between predetermined liquid levels.
"Bedroom" means any room within a dwelling accepted as a bedroom by state or local building departments.
"Biochemical Oxygen Demand" (BOD5) means the quantity of oxygen used in the biochemical oxidation of organic matter in five days at 20 degrees centigrade under specified conditions and reported as milligrams per liter (mg/L).
"Black Waste" means human body wastes including feces, urine, other substances of body origin, and toilet paper.
"Capping Fill System" means an alternative system that incorporates an absorption trench with an effective sidewall installed a minimum of 12 inches into the natural soil below a soil cap of specified depth and texture.
"Carbonaceous Biochemical Oxygen Demand" (CBOD5) means BOD minus the nitrogenous oxygen demand, typically measured in mg/L.

"Chemical Recirculating Toilet Facility" means a toilet facility wherein black wastes are deposited and carried from a bowl by a combination of liquid waste and water that has been chemically treated and filtered.

"Chemical Toilet Facility" means a nonflushing, nonrecirculating toilet facility wherein black wastes are deposited directly into a chamber containing a solution of water and chemical.

"Clayey Soil" means mineral soil with over 40 percent clay that shrinks and develops wide cracks when dry and swells and shears when wet, forming slickensides and wedge-shaped structure. Clayey soil is very hard or extremely hard when dry, very firm when moist, and very sticky and very plastic when wet.

"Claypan" means a dense, compact clay layer in the subsoil. It has a much lower permeability than the overlying soil horizon from which it is separated by an abrupt boundary. Claypans are hard when dry and very sticky and very plastic when wet and impede movement of water, air, and growth of plant roots.

"Combustion Toilet Facility" means a toilet facility wherein black wastes are deposited directly into a combination chamber for incineration.

"Commercial Facility" means any structure or building or portion thereof other than a single-family dwelling.

"Commercial Food Service High Strength Waste Water" means wastewater that does not exceed 900 mg/L BOD and has a properly sized and functioning oil/grease interceptor.

"Community System" means an onsite system that serves more than one lot or parcel, more than one condominium unit, or more than one unit of a planned unit development.

"Completed Application" means an application form that is completed in full; is signed by the owner or owner's authorized representative and is accompanied by all required exhibits and fees.

"Conditions Associated with Saturation" means soil morphological properties that may indicate the presence of a water table that persists long enough to impair system function and create a potential health hazard. These conditions include depleted matrix chromas caused by saturation and not a relict or parent material feature, and the following:

(a) High chroma matrix with iron depletions. Soil horizons whose matrix chroma is 3 or more in which there are some visible iron depletions having a value 4 or more and a chroma of 2 or less. Iron-manganese concentrations as soft masses or pore linings may be present but are not diagnostic of conditions associated with saturation.

(b) Depleted matrix with iron concentrations. Soil horizons whose matrix color has a value of 4 or more and a chroma of 2 or less as a result of removal of iron and manganese oxides. Some visible zones of iron concentration are present as soft masses or pore linings.

(c) Depleted matrix without iron concentrations. Soil horizons whose color is more or less uniform with a value of 4 or more and a chroma of 2 or less as a result of removal of iron and manganese oxides. These horizons lack visible iron concentrations as soft masses or pore linings.

(d) Reduced matrix. Soil horizons whose color has a value of 4 or more and a chroma of 2 or less with hues that are often, but not exclusively, on the gley pages of the Munsell Color Book. Upon exposure to air, yellow colors form within 24 hours as some of the ferrous iron oxidizes.

(e) Dark colored soils with organic matter accumulation. Mineral soils with a high amount of decomposed organic matter in the saturated zone, a value of 3 or less, and a chroma of 1 or less. Included in this category are organic soils with a minor amount of mineral matter.

(f) Soils with a dark surface. The upper surface layer has a dark color with a value of 3 or less and a chroma of 1 or less immediately underlain by a layer with a chroma of 2 or less.

(g) Iron stripping and staining in sandy soils. Soil horizons in which iron/manganese oxides or organic matter or both have been stripped from the matrix, exposing the primary base color of soil materials. The stripped areas and trans-located oxides or organic matter form a diffuse splotchy pattern of two or more colors.

(h) Salt-affected soils. Soils in arid and semi-arid areas that have visible accumulations of soluble salts at or near the ground surface.

(i) Dark colored shrink-swell soils. Vertisols whose colors have values of 3 or less and chromas of 1 or less. Iron concentrations may be present but are not diagnostic of conditions associated with saturation.

"Confining Layer" means a layer associated with an aquifer that because of low permeability does not allow water to move through it perceptibly under head differences occurring in the groundwater system.

"**Construction"** includes the installation of a new system or part thereof or the alteration, repair, or extension of an existing system. The grading, excavating, and earth-moving work connected with installation, alteration, or repair of a system or part thereof is considered system construction.

"Conventional Sand Filter" means a filter with 2 feet or more of sand filter media designed to chemically and biologically process septic tank or other treatment unit effluent from a pressure distribution system operated on an intermittent basis.

"Curtain Drain" means a groundwater interceptor that is designed to divert groundwater from an absorption facility. The drain creates a "curtain" to block water from reaching the absorption facility.

"Department" means Modoc County Environmental Health (MCEH)

"Design Capacity" means the maximum daily flow a system is designed to treat and disperse.

"Design Criteria" means the criteria used in designing onsite wastewater treatment systems including but not limited to dimensions, geometry, type of materials, size of drain media or filter media, absorption field sizing, depth, grade or slope, hydraulic loading rate, or any other factor relevant to the successful operation of the system. It does not include absorption area siting criteria.

"Designer" means a person who plans onsite wastewater treatment and dispersal technology for an onsite system.

"Director" means the Director of the Modoc County Environmental Health Division.

"Disposal Trench" means "absorption trench."

"Distribution Box" means a watertight structure that receives septic tank or other treatment facility effluent and distributes it concurrently into 2 or more header pipes leading to the absorption area.

"Distribution Pipe" means an open-jointed or perforated pipe used in the dispersion of septic tank or other treatment facility effluent into absorption trenches, seepage trenches, or seepage beds.

"Distribution Unit" means a distribution box, dosing tank, diversion valve or box, header pipe, or other means of transmitting septic tank or other treatment unit effluent from the effluent sewer to the distribution pipes.

"Diversion Valve" means a watertight structure that receives septic tank or other treatment facility effluent through one inlet and distributes it to 2 outlets, only one of which is used at a time.

"Dosing Tank" means a watertight receptacle placed after a septic tank or other treatment facility equipped with an automatic siphon or pump.

"Dosing Septic Tank" means a unitized device performing functions of both a septic tank and a dosing tank.

"Drainfield" means an "absorption field."

"Drain Media" means clean washed gravel or clean, crushed rock with a minimum size of 3/4 inch and a maximum size of 2-1/2 inches used in the distribution of effluent. The material must be durable and inert so that it will maintain its integrity, will not collapse or disintegrate with time, and will not be detrimental to the performance of the system. Drain media also includes any product or material approved by MCEH for distribution of effluent in an absorption field.

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

"Effective Seepage Area" means the sidewall area within an absorption trench or a seepage trench from the bottom of the trench to a level 2 inches above the distribution pipes; the sidewall area of any cesspool, seepage pit, unsealed earth pit privy, graywater waste absorption sump seepage chamber, or trench with drain media substitute; or the bottom area of a pressurized soil absorption facility installed in soil.
"Effective Soil Depth" means the depth of soil material above a layer that impedes movement of water and air and growth of plant roots. Layers that differ from overlying soil material enough to limit effective soil depth are hardpans, claypans, fragipans, compacted soil, bedrock, saprolite, and clayey soil.
"Effluent Filter" means an effluent treatment device installed on the outlet of a septic tank or outside the septic tank in a separate enclosure and designed to prevent the passage of suspended matter larger than 3/16 inch in size. Filter shall be (NSF/ANSI) approved for septic tank effluent.
"Effluent Lift Pump" means a pump used to lift septic tank or other treatment facility effluent to a higher elevation.
"Effluent Sewer" means that part of the system of drainage piping that conveys partially treated sewage from a septic tank or other treatment facility into a distribution unit or an absorption facility.
"Emergency Repair" means immediate action to repair a failing system when sewage is backing up into a dwelling or building or to repair a broken pressure sewer pipe. It does not include the construction of new or additional absorption facilities but does include use of the septic tank as a temporary holding tank until new or additional absorption facilities can be permitted and constructed.
"Equal Distribution" means the distribution of effluent to a set of absorption trenches in which each trench receives effluent in equivalent or proportional volumes.
"Escarpment" means any naturally occurring slope greater than 50 percent that extends vertically 6 feet or more from toe to top, is characterized by a long cliff or steep slope that separates two or more comparatively level or gently sloping surfaces, and may intercept one or more layers that limit effective soil depth.
"Existing Onsite Wastewater Treatment System" means any installed onsite wastewater treatment system constructed in conformance with the rules, laws, and local ordinances in effect at the time of construction.
"Existing System" means "existing onsite wastewater treatment system."
"Failing System" means any system that discharges untreated or incompletely treated sewage or septic tank effluent directly or indirectly onto the ground surface or into public waters or that creates a public health hazard.
"Fecal Coliform" means bacteria common to the digestive systems of warm-blooded animals and cultured in standard tests. The term is typically used to indicate fecal pollution and the possible presence of enteric pathogens and is measured as colonies/100ml.
"Filter Fabric" means a woven or spun-bonded sheet material used to impede or prevent the movement of sand, silt, and clay into drain media.
"Fragipan" means a loamy subsurface horizon with high bulk density relative to the horizon above, seemingly cemented when dry, and weakly to moderately brittle when moist. Fragipans are mottled and low in organic matter, and they impede movement of water and air and growth of plant roots.
"Grade" means the rate of fall or drop in inches per foot or the percentage of fall of a pipe.
"Graywater" means household sewage other than "black wastes," such as bath water, kitchen waste water, and laundry wastes.
"Graywater Waste Sump" means a receptacle or series of receptacles designed to receive hand-carried graywater for dispersal into the soil.
"Grease and Oils" means a component of sewage typically originating from food stuffs, consisting of compounds of alcohol or glycerol with fatty acids.

"Groundwater Interceptor" means any natural or artificial groundwater or surface water drainage system, including drain tile, curtain drain, foundation drain, cut banks, and ditches, that intercept and divert groundwater or surface water from the area of the absorption facility.
"Hardpan" means a hardened layer in soil caused by cementation of soil particles with silica, calcium carbonate, magnesium carbonate, iron, or organic matter. The hardness does not change appreciably with changes in moisture content. Hardpans impede movement of water and air and growth of plant roots.
"Header Pipe" means a tight-jointed part of the sewage drainage conduit that receives septic tank effluent from the distribution box, drop box, or effluent sewer and conveys it to the absorption area.
"Headwall" means a steep slope at the head or upper end of a land slump block or unstable landform.
"Holding Tank" means a watertight receptacle designed to receive and store sewage to facilitate treatment at another location.
"Holding Tank System" means an alternative system consisting of the combination of a holding tank, service riser, and level indicator (alarm), designed to receive and store sewage for intermittent removal for treatment at another location.
"Hydrosplitter" or **"hydrasplitter"** means a hydraulic device to proportion flow under pressure by the use of one or more orifices.
"Incinerator Toilet Facility" means "combustion toilet facility."
"Individual System" means a system that is not a community system.
"Individual Water Supply" means a source of water and a distribution system that provides water for drinking, culinary, or household uses and is not a public water supply system.
"Industrial Waste" means any liquid, gaseous, radioactive, or solid waste or a combination thereof resulting from any process of industry, manufacturing, trade, or business or from the development or recovery of any natural resources.
"Intermittent Sand Filter" means a conventional sand filter.
"Intermittent Stream" means any public surface water or groundwater interceptor that continuously flows water for a period greater than two months in any one year but not continuously for that year.
"Invert" is the lowest portion of the internal cross section of a pipe or fitting.
"Lateral Pipe" means "distribution pipe."
"Maintenance" means taking the actions necessary to keep onsite system components properly functioning as designed. Maintenance is further defined as:

(a) Major Maintenance is cleaning, repairing or replacing a broken or plugged effluent sewer pipe that:

(A) Is the same make and model; or

(B) Meets the requirements in this division; and

(C) Is performed by a certified maintenance provider or certified licensed installer.

(b) Minor Maintenance includes, but is not limited to, repairing or replacing of a tank riser or lid, or pump, screen, filter, or other component internal to the tank that:

(A) Is the same make and model; or

(B) Meets the requirements in this division.

"Maintenance provider" means a person who performs maintenance of onsite systems and:

(a) Possesses adequate skills and knowledge regarding onsite wastewater treatment, absorption facilities, and system functions to competently inspect and maintain onsite systems, and

(b) Is certified by the system manufacturer if required.

"Mechanical Sewage Treatment Facility" or "Mechanical Oxidation Sewage Treatment Facility" means an aerobic sewage treatment facility.
"Nonwater-Carried Waste Facility" means any toilet facility that has no direct water connection, including but not limited to pit privies, vault privies, and portable toilets.

"Occupant" means any person living or sleeping in a dwelling.
"Onsite Sewage Disposal System" means "onsite wastewater treatment system."
"Onsite Wastewater Treatment System" (OWTS) means any existing or proposed subsurface onsite wastewater treatment and dispersal system including but not limited to a standard subsurface, alternative, experimental, or nonwater-carried sewage system. It does not include systems that are designed to treat and dispose of industrial waste.
"Owner" means any person who alone, jointly, or severally:

(a) Has legal title to any single lot, dwelling, dwelling unit, or commercial facility;
(b) Has care, charge, or control of any real property as agent, executor, administrator, trustee, commercial lessee, or guardian of the estate of the holder of legal title; or
(c) Is the contract purchaser of real property.

"Permanent Groundwater Table" means the upper surface of a saturated zone that exists year-round or for a period of time that develops soil features that would inhibit the effectiveness of a OWTS by causing a public health or environmental hazard. The thickness of the saturated zone and resulting elevation of the permanent groundwater table may fluctuate as much as 20 feet or more annually, but the saturated zone and associated permanent groundwater table is present at some depth beneath land surface throughout the year.
"Permit" means the written document, issued and signed by an agent, that authorizes a permittee to install a system or any part thereof and, in some cases, to operate and maintain the system in accordance with the permit.
"Person" includes individuals, corporations, associations, firms, partnerships, joint stock companies, public and municipal corporations, political subdivisions, the state and any agencies thereof, and the federal government and any agencies thereof.
"Pollution" or **"Water Pollution"** means any alteration of the physical, chemical, or biological properties of any waters of the state, including change in temperature, taste, color, turbidity, silt, or odor of the waters, or any discharge of any liquid, gaseous, solid, radioactive, or other substance into any waters of the state that, alone or in connection with any other substance, threatens to create a public nuisance or render such waters harmful, detrimental, or injurious to public health, safety, or welfare or to domestic, commercial, industrial, agricultural, recreational or other legitimate beneficial uses or to livestock, wildlife, fish, or other aquatic life or the habitat thereof.
"Portable Toilet" means any self-contained chemical toilet facility that is housed within a portable toilet shelter and includes but is not limited to construction-type chemical toilets.
"Pressure Distribution Lateral" means piping and fittings in pressure distribution systems that distribute septic tank or other treatment unit effluent to drain media through small diameter orifices.
"Pressure Distribution Manifold" means piping and fittings in a pressure distribution system that supply effluent from pressure transport piping to pressure distribution laterals.
"Pressure Distribution System" means any system designed to uniformly distribute septic tank or other treatment unit effluent under pressure in an absorption facility or treatment unit.
"Pressure Transport Piping" means piping that conveys sewage effluent from a septic tank or other treatment or distribution unit typically by means of a pump or siphon.
"Pretreatment" means the wastewater treatment that takes place prior to discharging to any component of an onsite wastewater treatment system, including but not limited to pH adjustment, oil and grease removal, BOD5 and TSS reduction, screening, and detoxification.
"Privy" means a structure used for disposal of human waste without the aid of water. It consists of a shelter built above a pit or vault in the ground into which human waste falls.
"Projected Daily Sewage Flow" or **"design flow"** means the peak daily quantity of sewage production from a facility for which a system is sized and designed. The projected daily sewage flow allows for a safety margin and reserve capacity for the system during periods of heavy use.

"Public Health Hazard" means the presence of sufficient types or amounts of biological, chemical, physical, or radiological agents relating to water or sewage that cause or threaten to cause human illness, disorders, or disability. These include but are not limited to pathogenic viruses, bacteria, parasites, toxic chemicals, and radioactive isotopes.

"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. This shall include an individual who possesses a registered environmental health specialist certificate, registered geologist, or licensed as a professional engineer. Soil scientist certified by the Soil Science Society of America can be considered qualified professionals for purposes of site evaluations if approved by the director.

"Recirculating Gravel Filter (RGF)" means a gravel filter wastewater treatment system in which a portion of the filtered effluent is mixed with septic tank effluent in a recirculation/dilution tank and redistributed to the filter.

"Recirculating Gravel Filter System" means a recirculating gravel filter and an absorption facility used to treat wastewater.

"Redundant Absorption Field System" means a system in which two complete absorption fields are installed, the absorption trenches of each system alternate with each other, and only one system operates at a given time.

"Repair" means installation of all portions of a system necessary to eliminate a public health hazard or pollution of public waters created by a failing system.

(a) Major repair is the replacement of the soil absorption facility, treatment unit, or any part thereof.

(b) Minor repair is the replacement of a septic tank.

"Residential Strength Wastewater" means septic tank effluent that does not typically exceed five-day biochemical oxygen demand (BOD5) of 300 mg/L; total suspended solids (TSS) of 150 mg/L; total Kjeldahl nitrogen (TKN) of 150 mg/L; oil & grease of 25 mg/L; or concentrations or quantities of other contaminants normally found in residential sewage.

"Sand Filter Media" means a medium sand or other approved material used in a conventional sand filter. The media must be durable and inert so that it will maintain its integrity, will not collapse or disintegrate with time, and will not be detrimental to the performance of the system. The particle size distribution of the media must be determined through a sieve analysis conducted in accordance with ASTM C-117 and ASTM C-136. The media must comply with the following particle size distribution: 100 percent passing the 3/8 inch sieve, 95 percent to 100 percent passing the No. 4 sieve, 80 percent to 100 percent passing the No. 8 sieve, 45 percent to 85 percent passing the No. 16 sieve, 15 percent to 60 percent passing the No. 30 sieve, 3 percent to 15 percent passing the No. 50 sieve, and 4 percent or less passing the No. 100 sieve.

"Sand Filter Surface Area" means the area of the level plane section in the medium sand horizon of a conventional sand filter located 2 feet below the bottom of the drain media containing the pressurized distribution piping.

"Sand Filter System" means an alternative system that combines a septic tank or other treatment unit; a dosing system with effluent pump and controls or dosing siphon, piping and fittings; a sand filter; and an absorption facility to treat wastewater.

"Saprolite" means weathered material underlying the soil that grades from soft thoroughly decomposed rock to rock that has been weathered sufficiently so that it can be broken in the hands or cut with a knife. It has rock structure instead of soil structure and does not include hard bedrock or hard fractured bedrock.

"Saturated Zone" means a three-dimensional layer, lens, or other section of the subsurface in which all open spaces including joints, fractures, interstitial voids, and pores are filled with groundwater. The

thickness and extent of a saturated zone may vary seasonally or periodically in response to changes in the rate or amount of groundwater recharge or discharge.

"Scum" means a mass of sewage solids floating at the surface of sewage that is buoyed up by entrained gas, grease, or other substances.

"Seepage Area" means "effective seepage area."

"Seepage Bed" means an absorption system having absorption trenches wider than 3 feet.

"Seepage Pit" means a cesspool that has a treatment facility such as a septic tank ahead of it.

"Seepage Trench System" means a system with absorption trenches with more than 6 inches of drain media below the distribution pipe.

"Self-Contained Nonwater-Carried Waste Containment Facility" means a system in which all waste is contained in a watertight receptacle, including but not limited to vault privies, chemical toilets, combustion toilets, recirculating toilets, and portable toilets.

"Septage" means the domestic liquid and solid sewage pumped from septic tanks, cesspools, holding tanks, vault toilets, chemical toilets or other similar domestic sewage treatment components or systems and other sewage sludge not derived at sewage treatment plants.

"Septic Tank" means a watertight receptacle that receives sewage from a sanitary drainage system and is designed to separate solids from liquids, digest organic matter during a period of detention, and allow the liquids to discharge to a second treatment unit or to a soil absorption facility.

"Septic Tank Effluent" means partially treated sewage that is discharged from a septic tank.

"Serial Distribution" means the distribution of effluent to a set of absorption trenches constructed at different elevations in which one trench at a time receives effluent in consecutive order beginning with the uppermost trench by means of a drop box, a serial overflow, or another approved distribution unit. The effluent in an individual trench must reach a level of 2 inches above the distribution pipe before effluent is distributed to the next lower trench.

"Sewage" means water-carried human and animal wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments, or other places, together with any groundwater infiltration, surface waters, or industrial waste that may be present.

"Sewage Disposal Service" means:

(a) The construction of onsite wastewater treatment systems (including the placement of portable toilets) or any part thereof;

(b) The pumping out or cleaning of onsite wastewater treatment systems (including portable toilets) or any part thereof;

(c) The disposal of material derived from the pumping out or cleaning of onsite wastewater treatment systems (including portable toilets); or

(d) Grading, excavating, and earth-moving work connected with the operations described in subsection (a) of this section.

"Sewage Stabilization Pond" means a pond designed to receive the raw sewage flow from a dwelling or other building and retain that flow for treatment without discharge.

"Site Evaluation Report" means a report on the evaluation of a site to determine its suitability for an onsite system prepared in accordance with section 6.0 of this policy.

"Slope" means the rate of fall or drop in feet per 100 feet of the ground surface. It is expressed as percent of grade.

"Soil Permeability" refers to the ability of a soil to transmit water or air.

"Soil Separate" means the size of soil particles described in Table 6.

"Soil Texture" means the amount of each soil separate in a soil mixture. Field methods for judging the texture of a soil consist of forming a cast of soil, both dry and moist, in the hand and pressing a ball of moist soil between thumb and finger.

(a) The major textural classifications are defined as follows and shown in Table 5.

(A) Sand: Individual grains can be seen and felt readily. Squeezed in the hand when dry, this soil will fall apart when the pressure is released. Squeezed when moist, it will form a cast that will hold its shape when the pressure is released but will crumble when touched.

(B) Loamy Sand: Consists primarily of sand, but has enough silt and clay to make it somewhat cohesive. The individual sand grains can readily be seen and felt. Squeezed when dry, the soil will form a cast that will readily fall apart, but if squeezed when moist, a cast can be formed that will withstand careful handling without breaking.

(C) Sandy Loam: Consists largely of sand, but has enough silt and clay present to give it a small amount of stability. Individual sand grains can be readily seen and felt. Squeezed in the hand when dry, this soil will readily fall apart when the pressure is released. Squeezed when moist, it forms a cast that will not only hold its shape when the pressure is released but will withstand careful handling without breaking. The stability of the moist cast differentiates this soil from sand.

(D) Loam: Consists of an even mixture of the different sizes of sand and of silt and clay. It is easily crumbled when dry and has a slightly gritty, yet fairly smooth feel. It is slightly plastic. Squeezed in the hand when dry, it will form a cast that will withstand careful handling. The cast formed of moist soil can be handled freely without breaking.

(E) Silt Loam: Consists of a moderate amount of fine grades of sand, a small amount of clay, and a large quantity of silt particles. Lumps in a dry, undisturbed state appear quite cloddy, but they can be pulverized readily; the soil then feels soft and floury. When wet, silt loam runs together in puddles. Either dry or moist, casts can be handled freely without breaking. When a ball of moist soil is passing between thumb and finger, it will not press out into a smooth, unbroken ribbon but will have a broken appearance.

(F) Clay Loam: Consists of an even mixture of sand, silt, and clay that breaks into clods or lumps when dry. When a ball of moist soil is pressed between the thumb and finger, it will form a thin ribbon that will readily break, barely sustaining its own weight. The moist soil is plastic and will form a cast that will withstand considerable handling.

(G) Silty Clay Loam: Consists of a moderate amount of clay, a large amount of silt, and a small amount of sand. It breaks into moderately hard clods or lumps when dry. When moist, a thin ribbon or 1/8-inch wire can be formed between thumb and finger that will sustain its weight and will withstand gentle movement.

(H) Silty Clay: Consists of even amounts of silt and clay and very small amounts of sand. It breaks into hard clods or lumps when dry. When moist, a thin ribbon or 1/8 inch or smaller wire formed between thumb and finger will withstand considerable movement and deformation.

(I) Clay: Consists of large amounts of clay and moderate to small amounts of sand and silt. It breaks into very hard clods or lumps when dry. When moist, a thin, long ribbon or 1/16-inch wire can be molded with ease. Fingerprints will show on the soil, and a dull to bright polish is made on the soil by a shovel.

(b) Soil textural characteristics described in the United States Department of Agriculture Textural Classification Chart are incorporated herein by reference. This textural classification chart is based on the Standard Pipette Analysis as defined in the United States Department of Agriculture, **Soil Conservation Service Soil Survey Investigations Report No. 1 (See Table 5)**.

"Soil with Rapid or Very Rapid Permeability" means:

(a) Soil that contains 35 percent or more of coarse fragments 2 millimeters in diameter or larger by volume with interstitial soil of sandy loam texture or coarser;

(b) Coarse textured soil defined as loamy sand or sand in this rule; or

(c) Stones, cobbles, gravel, and rock fragments with too little soil material to fill interstices larger than 1 millimeter in diameter.

"Split Waste Method" means a process where black waste sewage and graywater from the same dwelling or building are managed by separate systems.

"Standard Subsurface System" means an onsite wastewater treatment system consisting of a septic tank, distribution unit, and absorption facility constructed in accordance with this policy.

"SWRCB" means California State Water Resources Control Board.

"Steep Slope System" means a seepage trench system installed on slopes greater than 30 percent and less than or equal to 45 percent.

"Subsurface Absorption System" means the combination of a septic tank or other treatment unit and an effluent sewer and absorption facility.

"Subsurface Sewage Disposal" means "subsurface wastewater treatment."

"Subsurface Disposal System" means "subsurface absorption system."

"Subsurface Wastewater Treatment" means the dispersal of wastewater from a septic tank or other treatment unit into the zone of aeration to be further treated through physical, chemical, or biological processes.

"System" or "onsite system" means "onsite wastewater treatment system."

"Test Pit" means an open pit dug to sufficient size and depth to permit thorough examination of the soil to evaluate its suitability for subsurface wastewater treatment.

"Tile Dewatering System" means an alternative system in which the absorption facility is encompassed with field collection drainage tile to reduce and control a groundwater table and create a zone of aeration below the bottom of the absorption facility.

"Toilet Facility" means a fixture housed within a toilet room or shelter to receive black waste.

"Total Kjeldahl Nitrogen" (TKN) means the combination of ammonia and organic nitrogen, excluding nitrate and nitrite nitrogen.

"Total Nitrogen" (TN) means the sum of all nitrogen forms.

"Total Suspended Solids" (TSS) means solids in wastewater that can be removed readily by standard filtering procedures in a laboratory and reported as milligrams per liter (mg/L).

"Treatment" means the alteration of the quality of wastewaters by physical, chemical, or biological means or combination thereof to reduce potential degradation of water quality or the environment and risk to public health.

"Treatment Standard 1" means a 30-day average of less than 20 mg/L of BOD5 and 20 mg/L of TSS. A 30-day average of less than 17 mg/L of CBOD5 is acceptable in lieu of the BOD5 value.

"Treatment Standard 2" means a 30-day average of less than 20 mg/L of BOD5 and 20 mg/L of TSS, a 30-day geometric mean of less than 400 fecal coliform per 100 milliliters, and a 30-day average of 30 mg/L of TN. A 30-day average of less than 17 mg/L of CBOD5 is acceptable in lieu of the BOD5 value.

"Turbidity" means the optical condition of waters caused by suspended or dissolved particles or colloids that scatter and absorb light rays instead of transmitting light in straight lines through the water column. Turbidity may be expressed as nephelometric turbidity units (NTU) measured with a calibrated turbidimeter.

"Underdrain Media" means the material placed under the sand filter media in a sand filter and consists of clean, washed pea gravel with 100 percent passing the 1/2 inch sieve, 18 to 100 percent passing the ¼ inch sieve, 5 to 75 percent passing the No. 4 sieve, 24 percent or less passing the No. 10 sieve, 2 percent or less passing the No. 16 sieve, and 1 percent or less passing the No. 100 sieve.

"Unstable Landforms" means areas showing evidence of mass downslope movement such as debris flow, landslides, rockfall, and hummock hill slopes with undrained depressions upslope. Examples are landforms exhibiting slip surfaces roughly parallel to the hillside; landslide scars and curving debris

ridges; fences, trees, and telephone poles that appear tilted; and tree trunks that bend uniformly as they enter the ground. Active sand dunes are unstable landforms.
"Vertisols" means a mineral soil characterized by a high content of swelling-type clays that in dry seasons cause the soils to develop deep, wide cracks.
"Wastewater" means "sewage."
"Zone of Aeration" means the unsaturated zone that occurs below the ground surface and above the point at which the upper limit of the water table exists.

2.0 Purpose

These rules establish requirements for the construction, alteration, repair, operation, and maintenance of onsite wastewater treatment systems. Their purpose is to restore and maintain the quality of public waters and to protect the public health and general welfare of the people of Modoc County.

3.0 Jurisdiction and Responsibility

This policy is approved by the Central Valley Regional Water Quality Control Board (CVRWQCB) and adopted by the Modoc County Board of Supervisors per Modoc County Code Chapter 13.04. CVRWQCB authorizes Modoc County to permit onsite systems, including receiving and processing applications, issuing permits, enforcing, and performing required inspections for onsite systems that do not require WDR permits. Identified general policy responsibility is as follows.

(1) Each owner of real property is jointly and severally responsible for:
- (a) Treating wastewater generated on that property in conformance with the rules adopted by the CVRWQCB and Modoc County;
- (b) Connecting all plumbing fixtures from which wastewater is or may be discharged to a sewerage facility or approved onsite system;
- (c) Maintaining, repairing, and replacing the onsite system on that property as necessary to ensure proper operation of the system; and
- (d) Complying with all requirements for construction, installation, maintenance, replacement, and repair of onsite systems required in Modoc County Code and board approved policy.

(2) Modoc County is responsible for:
- (a) Shall submit an annual report to all the regional boards within the county containing the following information in tabular format.
  - (A) Number and location of complaints pertaining to OWTS and resolution, Attachment 1.
  - (B) 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, Attachment 3.
  - (C) Number, location, type of permit issued, and tier for new and replacement OWTS, Attachment 2.
- (b) MCEH shall maintain permit records filed according to township, range, and section. Permits may be filed electronically as budget allows. All permits are subject to MCEH public records request policy and procedure. Permit request will be processed within 10 working days as resources allow.
- (c) Notification shall be made to a public water system and the California Department of Public Health upon discovery of a failing septic system or new installation or repair as described in the State Water Resources Control Board OWTS Policy Sections 3.5, 9.2.11 and 9.2.12.

(d) MCEH shall not issue permits for or have oversite of OWTS that discharge greater than 10,000 gallons per day.

(e) MCEH shall maintain an OWTS owner education and outreach program. The Outreach could include a volunteer well monitoring program as budget permits. The program will be posted on MCEH website.

4.0 General Standards, Prohibitions and Requirements

(1) Protection of public waters from public health hazards. An agent may not authorize installation or use of a system that is likely to pollute public waters or create a public health hazard. If, in the judgment of the agent, the minimum standards in this policy will not adequately protect public waters or public health on a particular site, the agent must require a system to meet requirements that are protective. This may include but is not limited to increasing setbacks, increasing drainfield sizing, or using an alternative system. The agent must provide the applicant with a written statement of the specific reasons why more stringent requirements are necessary.

(2) Approved treatment and dispersal required. All wastewater must be treated and dispersed in a manner approved in accordance with these rules.

(3) Prohibited discharges of wastewater. A person may not discharge untreated or partially treated wastewater or septic tank effluent directly or indirectly onto the ground surface or into public waters. Such discharge constitutes a public health hazard and is prohibited.

(4) Prohibited discharges to systems. A person may not discharge into any system cooling water, air conditioning water, water softener brine, groundwater, oil, hazardous materials, roof drainage, or other aqueous or nonaqueous substances that are detrimental to the performance of the system or to groundwater.

(5) Increased flows prohibited. Except where specifically allowed by this policy, a person may not connect a dwelling or commercial facility to a system if the total projected sewage flow would be greater than that allowed under the original system construction-installation permit.

(6) System capacity. Each system must have adequate capacity to properly treat and disperse the maximum projected daily sewage flow. The projected quantity of sewage flow must be determined from **Table 2** or other information the agent determines to be valid. The agent may approve a twenty-five percent reduction from flow estimates in **Table 2** if all the following apply:

(a) New construction or Remodels that result in utilizing or changing fixtures to current water efficiency standards and utilization of energy star appliances.

(b) Applicant requests the energy efficient twenty-five percent reduction in the application process.

(c) Permit lists the water efficiency requirements as a condition of use.

(d) Agent concurs with the reduction.

(7) Material standards. All materials used in onsite systems must comply with general industry standards and be approved by MCEH. A list of approved materials and alternative septic systems can be obtained from MCEH.

(8) Encumbrances. Before a permit to install a new system may be issued, the site for the new system must have any encumbrances identified, on the application, by the applicant (such as easements or deed restrictions) that could prevent the installation or operation of the system from conforming with this policy.

(9) Plumbing fixtures connected. All plumbing fixtures in dwellings, commercial facilities, and other structures from which sewage is or may be discharged must be connected to and discharge into an approved area-wide sewerage system or an approved onsite system that is not failing.

(10) Future connection to sewerage system. Placement of plumbing in buildings to facilitate connection to a sewerage system is encouraged in areas where a district has been formed to provide sewerage facilities.
(11) Property lines crossed: All or part of an onsite system, including areas for future repair or replacement, may not be located on one or more lots or parcels different from the lot or parcel on which the facility the system serves is located.
(12) Initial and replacement absorption area. Except as provided in specific rules, the absorption area, including installed system and replacement area, must not be subject to activity that is likely, in the opinion of the agent, to adversely affect the soil or the functioning of the system. This may include but is not limited to vehicular traffic, covering the area with asphalt or concrete, filling, cutting, livestock traffic, or other soil modification.
(13) Operation and maintenance. Owners of onsite systems must operate and maintain their systems in compliance with all permit conditions and applicable requirements in this policy and must not create a public health hazard or pollute public waters.
(14) Construction. An agent may limit the time period during which a system can be constructed to ensure that soil conditions, weather, groundwater, or other conditions do not adversely affect the reliability of the system.
(15) Permit requirements:

(a) A person may not cause or allow construction, alteration, or repair of a system or any part thereof without a permit issued by MCEH except for emergency repairs to existing systems as authorized under this policy.

(17) Annual permit fees and reports:

(a) Owners of sand filter, recirculating gravel filter, and alternative treatment technology systems that require a maintenance contract must submit annual fees and reports as follows:

(A) Owners must pay the annual report evaluation fee by the date specified for each year the system is in operation. A system is placed in operation when it first receives wastewater and remains in operation until MCEH receives notice the system has been decommissioned;

(B) Owners must submit written certification prepared by a maintenance provider on a MCEH approved form that assures the system has been maintained in accordance with the requirements of the rules in this policy during the reporting year and is operating in accordance with the approved design specifications.

(C) Owners are not required to submit fees or reports under this subsection that a maintenance provider has submitted on behalf of the owner in accordance with this section.

(18) Engineering plan review. Unless specifically exempted in this policy, all plans and specifications for the construction, installation, or modification of onsite systems must be submitted to the agent for approval or denial. The design criteria and rules governing the plan review are as follows:

(a) Plans and specifications for construction-installation permits for commercial sand filter, recirculating gravel filter, and advanced treatment technology systems with design capacities greater than 600 gpd may be required to be signed by a registered civil engineer.

(b) California Pines subdivision requires all OWTS plans to be signed by a Caifornia Registered Civil Engineer.

(19) Criteria and standards for design and construction. The criteria and standards for design and construction apply to all onsite systems:

(a) MCEH may authorize variances from the criteria, standards, and technologies in this policy through the Rural Area Consideration or by sound judgment of the director.

(20) Manufacturer's specifications. All materials and equipment, including but not limited to tanks, pipe, fittings, solvents, pumps, controls, and valves, must be installed, constructed, operated, and maintained in accordance with this policy and manufacturer's specifications.

(21) Sewer and water lines. Effluent sewer and water line piping constructed of materials that are approved for use within a building may be run in the same trench if both of the following conditions are met:

(a) The bottom of the water pipe at all points is at least 12 inches above the top of the sewer pipe;

(b) The water pipe is placed on a solid shelf excavated at one side of the common trench with a minimum clear horizontal distance of at least 12 inches from the sewer pipe.

Effluent sewer pipe of material not approved for use in a building must not be run or laid in the same trench as water pipe. All effluent sewer pipe shall install a minimum 18 gauge, green-jacketed tracer wire or green color-coded metallic locate tape placed above all tight piping.

(22) Septage management. A person may not dispose of wastewater, septage, or sewage-contaminated materials in any location or manner not authorized by MCEH.

(23) Service Contracts for supplemental treatment when required by MCEH or the manufacturer. Service contracts for servicing and maintaining onsite systems must include:

(a) A schedule for the first two years of operation that directs the maintenance provider to inspect, adjust and service the system a minimum of once every six months,

(b) A schedule for subsequent years of operation that directs the maintenance provider to inspect, adjust and service the system:

(A) According to the manufacturer's specifications in the approved owner's manual; and

(B) At least once every 12 months.

(c) A clause stating that the maintenance provider must provide an effluent quality inspection that includes but is not limited to:

(A) A visual assessment for color, turbidity, and scum overflow,

(B) An olfactory assessment for odor, and

(C) Any other performance assessment or operational diagnosis, which may include sampling of treated effluent (post-disinfection if disinfection is used) necessary to determine or ensure proper operation of the facility.

(d) A clause stating that the maintenance provider must notify the system owner in writing about any improper system function that cannot be remedied during the time of inspection and include an estimated date of correction.

(e) Other information and conditions of the agreement such as:

(A) Owner's name and address;

(B) Property address and legal description;

(C) Permit requirements;

(D) Contact information for the owner, maintenance provider, and agent;

(E) Details of service to be provided, including the service required in this section;

(F) Schedule of maintenance provider duties;

(G) Cost and length of service contract and time period covered;

(H) Details of any warranty; and

(I) Owner's responsibilities under the contract for routine operation of the onsite system.

(24) A maintenance provider under a contract must:

(a) Observe and record conditions in the drainfield during all operation and maintenance activities for the system and report those observations to the system owner;

(b) Make repairs or alteration to comply with applicable requirements in this policy.

(c) Maintain accurate records of their service contracts, customers, performance data, and time lines for renewing the contracts. These records must be available for inspection upon request by the agent;
(d) Notify the agent of service contracts that are terminated or not renewed within 30 days of their termination or expiration,
(e) Make emergency service available within 48 hours of a service request,
(f) Submit the annual report required in section (17) and the annual evaluation fee.
for each system under contract to be serviced by the maintenance provider.
(g) System owners must report evidence of any system failures to the agent and take appropriate action approved by the agent to correct the problem.

(25) Groundwater levels. All groundwater levels must be predicted using conditions associated with saturation. In areas where conditions associated with saturation do not occur or are inconclusive, such as in soil with rapid or very rapid permeability, predictions of the high level of the water table must be based on past recorded observations of an agent. If such observations have not been made or are inconclusive, the application must be denied until observations can be made. Groundwater level observations must be made during the period of the year in which high groundwater normally occurs in an area. A properly installed nest of piezometers or other methods acceptable to MCEH must be used for making water table observations.
(26) Separation of the bottom of the dispersal system to permanent groundwater less than two feet, except for seepage pits, which shall not be less than ten feet is prohibited.
(27) A person may not submit information required by statute, rule, permit, or order that is false, inaccurate, or incomplete.
(28) Any new or replacement OWTS on sites greater than 30% slope shall have a qualified registered professional report approved by MCEH and comply with section 23.0 prior to permit issuance.

5.0 Approval of New or Innovative Technologies, Materials, or Designs for Onsite Systems

(1) Must demonstrate to the director the effectiveness of the product to reasonably prevent public health risk and degradation to water quality. Approval of any product or process is subject to annual review by MCEH.

6.0 Site Evaluation Procedures

(1) A site evaluation is the first step in the process of obtaining a construction-installation permit for an onsite system. Except as otherwise provided in these rules, before obtaining a permit to construct an onsite system, a person must obtain a site evaluation report finding the site suitable for an onsite system in accordance with this policy.
(2) Completed applications for site evaluations must be submitted to the agent with all required exhibits and the applicable site evaluation fee.

(a) Unless other procedures are approved by MCEH, applicants must provide at least two test pits, with dimensions and configuration as directed by the agent, located approximately 75 feet apart and within the area of the proposed system, including the repair/replacement area.
(b) The fee paid for a site evaluation report covers as many site inspections within ninety days of the initial inspection as necessary to determine the suitability of a single lot or parcel for a single system. A site is considered to be suitable as soon as it is found to meet the criteria for any type of onsite system.

(3) Site evaluation report.

(a) The agent or, or a qualified professional must evaluate the site of the proposed system, consider all system options, and provide a report of such evaluation.
(b) The site evaluation report must be on a form approved by MCEH.
(c) The report must contain, at a minimum, a site diagram and observations of the following site characteristics.
(A) Parcel size;
(B) Slope in absorption field and replacement areas (percent and direction);
(C) Surface streams, springs, other bodies of water;
(D) Existing and proposed wells;
(E) Escarpments;
(F) Cuts and fills;
(G) Unstable landforms;
(H) Soil profiles determined from test pits provided by applicant;
(I) Water table levels (as indicated by conditions associated with saturation or water table observations);
(J) Useable area for initial and replacement absorption areas;
(K) Encumbrances observed or listed on the application;
(L) Sewerage availability;
(M) Other observations including off-site features as appropriate.
(d) Site evaluation reports for subdivisions or other land divisions must be based on an evaluation of each lot.
(e) Specific conditions or limitations imposed on an approved site must be listed on the evaluation report.
(f) A site evaluation report approving a site for a system qualifies the property owner for a permit to construct a system on that property if other requirements for a permit are met.
(g) Example MCEH site evaluation forms are in **Attachments 4, 5, and 6**.

(4) Approval or denial:
(a) A site must be approved for a system if the site evaluation report documents the following:
(A) The site evaluation report identifies the types of the initial and replacement systems for which the site is approved.
(B) All criteria for approval of a specific type or types of systems, as described in this policy, are satisfied.
(C) Each lot or parcel has sufficient usable area available to accommodate an initial and replacement system. The usable area must be located within the same parcel.
The initial and replacement systems may be of different types, e.g., a standard subsurface system as the initial system and an alternative system as the replacement system. The site evaluation report must indicate the types of the initial and replacement systems for which the site is approved.
(D) A replacement area is not required in areas under control of a legal entity such as a city, county, or sanitary district if the legal entity gives a written commitment that sewerage service will be provided within five years.
(b) A site must be denied if the conditions identified in section (4)(a) of this rule are not met or conflicts with SWRCB OWTS Policy section 9.4.9 cannot be mitigated.
(c) Changes in technical requirements in this policy may not invalidate a site approval but may require design changes or use of a different type of system.

7.0 Existing System Evaluation Report

(1) An evaluation of an existing onsite wastewater treatment system must meet the following requirements:

(a) An evaluation must be performed by a person with one or more of the qualifications listed below:

(A) California Registered Engineer with knowledge and experience inspecting onsite systems;

(B) A California Registered Environmental Health Specialist with knowledge and experience inspecting onsite systems;

(C) A specific manufacturer certified installer with knowledge and experience inspecting onsite systems;

(D) A specific manufacturer certified maintenance provider with knowledge and experience inspecting onsite systems;

(E) A current NAWT inspector with training and certification accreditation;

(F) A C-36 or C-42 California licensed contractor with knowledge and experience inspecting onsite systems.

(b) An evaluation must include the following:

(A) An examination of the records available on the existing system, including all permit records and pumping and other maintenance records.

(B) For existing systems without a permit record, the inspector must create a record to document system materials, components, and location. Methods used to create the record may include the use of soil probes, metal detectors, electronic pipe tracers, radio and video technology, and uncovering system components.

(C) A field inspection of the existing system.

(D) A report of findings on a form approved by MCEH including the information obtained relevant to system performance, such as age, usage, tank condition, records of installation, maintenance, and repairs; type, size, capacity, and condition of components; evidence of any failures; other relevant information (e.g., condition of repair area if known); and a complete sketch of the system showing location and distances of major components.

(E) The evaluation must include all portions of the system that serve the facility, including any portion located on a lot or parcel different from the lot or parcel on which the facility the system serves is located.

8.0 Permit Application Procedures -- Construction, Installation, Alteration, and Repair Permits

(1) Permittees. A permit for construction of a system may be issued under this rule only to the owner or authorized agent of the real property that the system will serve.

(2) Application. A completed application for a construction -- installation, alteration, or repair permit must be submitted to the appropriate agent on approved forms with all required exhibits the applicable permit application fee. Applications that are not completed in accordance with this section will not be accepted for filing. Except as otherwise allowed in this division, the exhibits must include:

(a) A site evaluation report approving the site for the type and quantity of waste to be disposed. Agents may waive the requirement for the report and fee for applications for repair or alteration permits.

(b) A land use compatibility statement from the appropriate land use authority as required by MCEH.

(c) Plans and specifications for the onsite system proposed for installation within the area identified and approved by the agent in a site evaluation report. The agent must determine and request the minimum level of detail necessary to insure proper system construction.

(d) Any other information the agent determines is necessary to complete the permit application.

(3) Deadlines for action. The agent must either issue or deny the permit within 20 days after receipt of the completed application unless weather conditions or distance and unavailability of transportation prevent the agent from timely action. The agent must notify the applicant of any delay and the reason for delay.

(4) Permit denial. The agent must deny a permit if any of the following occurs.

(a) The application contains false information.

(b) The application was wrongfully received by the agent.

(c) The proposed system would not comply with applicable requirements in this policy, county code, or state law.

(d) The proposed system, if constructed, would violate a moratorium issued by the applicable regional water quality control board.

(e) The proposed system location is encumbered as described in General Standards, Prohibitions and Requirements.

(f) A sewerage system that can serve the proposed sewage flow is both legally and physically available, as described in paragraphs (A),(B), and (C) of this subsection.

(A) Physical availability.

(i) A sewerage system is considered available if topographic or man-made features do not make connection physically impractical.

(ii) For proposed subdivisions or other developments the agent will determine sewerage availability.

(B) Legal availability. A sewerage system is deemed legally available if the system is not under a connection permit moratorium and the sewerage system owner is willing or obligated to provide sewer service.

(C) Complies with SWRCB OWTS Policy section 9.4.9.

(5) Permit effective dates. A permit issued for construction of a system pursuant to this rule is effective for one year from the date of issuance. After a system has been installed pursuant to the permit and finaled by agent in MCEH, conditions specified in the permit continue in force as long as the system is in use.

(6) Permit renewal, reinstatement, or transfer. An agent may renew, reinstate, or transfer a permit if the following conditions are met.

(a) The applicant submits a completed application for permit renewal before the permit expiration date or for reinstatement within one year after the permit expiration date.

(b) Applications for transfer of a permit from a permittee to another person must be filed before the permit expiration date. Only the name of the permittee may be changed in a transfer.

(c) Applications for permit renewal, reinstatement, or transfer must conform to the requirements of this policy and the permit will be issued or denied in accordance with this policy.

(7) Temporary holding tank. If a permit has been issued pursuant to these rules but existing soil moisture conditions preclude the construction of the soil absorption system, an agent may approve installation of a septic tank for use as a temporary holding tank for up to 8 months. Before approval, the permittee must demonstrate that the outlet of the tank has been sealed with a water tight seal and that the permittee has entered into a pumping contract for the tank. Unless otherwise authorized by the agent, the septic tank must be designed and constructed in accordance with this policy.

9.0 Pre-Cover Inspections

(1) System installers must request a pre-cover inspection when construction, alteration, or repair of a system is complete except for backfill (cover) and as otherwise required by a permit. The agent must inspect the installation to determine whether it complies with this policy, unless the agent waives the inspection in accordance with section (2) of this rule.

(2) The agent may waive inspections for a system proposed to serve a single family dwelling or for a system of similar flow and waste strength if:

(a) Upon request by the agent, the installer submits to the agent photographs of those portions of the construction for which the inspection is waived.

(3) To request a pre-cover inspection, the installer must submit the following information to the agent at the time construction of the system is complete.

(a) A detailed and accurate as-built plan of the constructed system.

(b) A list of all materials used in the construction of the system.

(4) An agent may require an owner to pay the re-inspection fee when a pre-cover inspection correction notice requires correction of improper construction and, at a subsequent inspection, the agent finds system construction deficiencies have not been corrected.

10.0 Decommissioning of Systems

(1) The owner must decommission a system when:

(a) A sewerage system becomes available and the facility the system serves has been connected to that sewerage system;

(b) The source of sewage has been permanently eliminated;

(c) The system has been operated in violation of Modoc County Code and a repair permit has not subsequently been issued for the system;

(d) The system has been constructed, installed, altered, or repaired without a permit required in this policy, and a permit has not subsequently been issued for the system; or

(2) Procedures for decommissioning.

(a) Tanks, cesspools, and seepage pits must be pumped by a MCEH registered sewage disposal service to remove all septage.

(b) Tanks, cesspools, and seepage pits must be filled with reject sand, bar run gravel, or other material approved by the agent, or the container must be removed and properly disposed.

(3) If, in the judgment of the agent, compliance with section (2) of this rule is not reasonably possible or necessary to protect public health, welfare, safety, or public waters, the agent may waive one or both of those requirements.

11.0 Prior Construction Permits or Approvals

All construction-installation permits issued before the effective date of this policy and not finalized by MCEH, shall be void upon board adoption, regional water board concurrence, and passing of the effective start date.

12.0 Authorization to Use Existing Systems

(1) Authorization Notice required. Except as specifically allowed in this rule, a person may not place into service, reconnect to, change the use of, or increase the projected daily sewage flow into an existing onsite system without first obtaining an Authorization Notice, construction-installation permit, or alteration permit as appropriate.

(2) Exceptions.

(a) An Authorization Notice is not required to replace a mobile home with a similar mobile home in a mobile home park or a recreation vehicle with another recreation vehicle in a lawful recreation vehicle park if the onsite wastewater system has adequate capacity for safe treatment of wastewater generated within the park.

(b) An Authorization Notice is not required to place into service a previously unused system for which a finalized permit has been issued within five years of the date such system is placed into service if the projected daily sewage flow does not exceed the design flow and the system is in compliance with the requirements of the permit and applicable requirements in this policy.

(3) A completed application for the Authorization Notice must be submitted to an agent with all required exhibits and the authorization notice fee. The exhibits must include:

(a) A land use compatibility statement from the appropriate land use authority.

(b) An accurate property development plan;

(c) An onsite system description;

(d) A lot map or equivalent plat map for the property;

(e) All other information the agent finds necessary to complete the application.

(4) If an alteration or repair requires a permit in accordance with this policy the agent must credit the Authorization Notice fee submitted with the Authorization Notice application toward the permit fee.

(a) The agent may require submittal of additional exhibits to complete the permit application and must issue or deny the permit in accordance with this policy.

13.0 Alteration of Existing Onsite Wastewater Treatment Systems

(1) Permit required. A person may not alter or increase the design capacity of an existing onsite wastewater treatment system without first obtaining an alteration permit in accordance with this policy or a construction-installation permit as applicable.

(2) An agent may issue an alteration permit if the requirements of either subsections (a) or (b) of this section are met.

(a) Alterations do not increase the system's design capacity above the original design flow and:

(A) The existing system is not failing;

(B) The site setbacks in **Table 1** can be met except that if the setbacks in **Table 1** for septic tanks, treatment units, effluent sewers, and distribution units cannot be met, the agent may allow a reasonable installation; and

(C) In the opinion of the agent, use of the onsite system would not create a public health hazard or result in water pollution.

(b) Alterations do not exceed the existing system design capacity by more than 300 gpd or 50 percent, and:

(A) The existing system is not failing;

(B) The setbacks in **Table 1** can be met; and

(C) In the opinion of the agent, use of the onsite system would not create a public health hazard or result in water pollution.

(3) An application for a construction-installation permit is required when the existing system design capacity is proposed to be exceeded by more than 300 gpd or more than 50 percent.

14.0 Repair of Existing Systems

(1) A failing system must be immediately repaired unless, in the opinion of the agent, adverse soil conditions resulting from climatic conditions would likely preclude a successful repair. In that circumstance, the agent may allow a delay in commencing or completing repairs until the soil conditions improve. If a delay is authorized, the agent must issue a notice of noncompliance to the system owner specifying a compliance date and any interim provisions required to prevent a public health hazard and protect public waters.

(2) Except for emergency repairs, a person may not repair a failing system without first obtaining a repair permit in accordance with this rule. Emergency repairs may be made without first obtaining a permit if a repair permit application is submitted to the agent within three working days after the emergency repairs are begun.

(3) Criteria for permit issuance.

(a) If the site characteristics and standards can be met, the repair installation must conform to the requirements.

(b) If the site characteristics or standards cannot be met, the agent may allow a reasonable repair installation to eliminate a public health hazard, including the installation of an alternative system as necessary.

(4) Notwithstanding the permit duration specified in this policy, a permit issued pursuant to this rule may be effective for a period of less than one year from the date of issue if specified by the agent.

(5) System owners must decommission failing systems in accordance with this policy if the systems cannot be repaired.

15.0 Standard Subsurface Systems

(1) Criteria For standard subsurface systems. Each site must meet all of the conditions in this section to be approved for a standard subsurface system.

(a) Effective soil depth must extend 24 inches or more below the ground surface as shown in Table 3. A minimum 6-inch separation must be maintained between the layer that limits effective soil depth and the bottom of the absorption facility.

(b) Water table levels must be predicted using standards described in this policy.

(A) The permanent water table must follow **Table 8** separation distances below the bottom of the absorption facility, except in defined geographic areas where the SWRCB has determined through a groundwater study that less separation will not degrade groundwater or threaten public health. In these exception areas, the permanent water table must be at least 24 inches below the ground surface.

(B) A groundwater interceptor may be used to intercept or drain water from an absorption area on sites with adequate slope to permit proper drainage. An agent may require a demonstration that the site can be de-watered before issuing a site evaluation report approving the site. Where required, groundwater interceptors are an integral part of the system but do not need to meet setback requirements to property lines, wells, streams, lakes, ponds, or other surface water bodies that are required for the wastewater absorption area.

(c) Except as provided in subsection (d) of this section, soil with rapid or very rapid permeability must be 36 inches or more below the ground surface. A minimum 18-inch separation must be maintained between soil with rapid or very rapid permeability and the bottom of absorption trenches.

(d) Sites may be approved with no separation between the bottom of absorption trenches and soil with rapid or very rapid permeability if any of the following conditions occur.

(A) A confining layer occurs between the bottom of absorption trenches and the groundwater table and a minimum 6-inch separation is maintained between the bottom of absorption trenches and the top of the confining layer.

(B) A layer of nongravelly (less than 15 percent gravel) soil with sandy loam or finer texture at least 18 inches thick occurs between the bottom of the absorption trenches and the groundwater table.

(C) The projected daily sewage flow does not exceed a loading rate of 450 gallons per acre per day.

(e) Slopes do not exceed 30 percent or the slope/effective soil depth relationship set forth in **Table 4**.

(f) The site has not been filled or the soil has not been modified in a way that would in the opinion of the agent, adversely affect functioning of the system.

(g) The site is not on an unstable land form that might adversely affect operation of the system.

(h) The site of the initial and replacement absorption facility is not covered by asphalt or concrete or subject to vehicular traffic, livestock, or other activity that would adversely affect the soil.

(i) The site of the initial and replacement absorption facility will not be subjected to excessive saturation from artificial drainage of ground surfaces, driveways, roads, roof drains, or other circumstances.

(j) Setbacks in **Table 1** except as modified by this subsection can be met.

(A) Surface waters setbacks. Setback from streams or other surface waters must be measured from bank drop-off or mean yearly high water mark, whichever provides the greatest separation distance.

(B) Water lines and sewer lines. Effluent sewer and water line piping constructed of materials that are approved for use within a building by the Modoc County Building Department may be run in the same trench or may cross. Where the effluent sewer pipe material is not approved for use in a building, it may not be run or laid in the same trench as water pipe unless:

(i) The bottom of the water pipe at all points is set at least 12 inches above the top of the sewer pipe; and

(ii) The water pipe is placed on a solid shelf excavated at one side of the common trench with a minimum, clear, horizontal distance of at least 12 inches from the sewer pipe.

(C) Septic tank setbacks. The agent must encourage the placement of septic tanks and other treatment units as close as feasible to the minimum separation from the building foundation to minimize clogging of the building sewer.

(D) Pressure transport pipe setback to well. Notwithstanding the setback distance in Table 1,the agent may allow the separation distance between a pressure transport pipe and a well to be less than 50 feet but no less than 25 feet when:

(i) The pressure transport pipe is PVC Sch. 40 or heavier pressure-rated piping meeting ASTM Specification D-2241;

(ii) The pressure transport pipe is placed within a larger diameter PVC or ABS Sch. 40 or heavier encasement pipe, with the pipe ends located at least 50 feet away from the well; and

(iii) All pipe joints in the pressure transport pipe and encasement pipe are solvent welded.

(E) Encroachment on well setbacks shall be determined by the agent and used for existing development. Encroachment on wells for new development shall demonstrate

equal or greater protection methods acceptable to MCEH. Such methods could include, but not limited to, increased well seal depth, pressure distribution, or advanced treatment.

(2) Criteria for sizing absorption fields. Absorption fields must be designed and sized based on the criteria in this section.

(a**) Table 2**, specifying quantities of sewage flows, or other information the agent determines is reliable with the following exception: A system must be sized on the basis of 300 gallons sewage flow per day plus 75 gallons per day for the third bedroom when the system:

(A) Is proposed to serve a single family dwelling on a recreational lot.

(B) The agent may approve a twenty-five percent reduction from flow estimates in **Table 2** if all the following apply:

(a) New construction or Remodels that result in utilizing or changing fixtures to current water efficiency standards and utilization of energy star appliances.

(b) Applicant requests the energy efficient twenty-five percent reduction in the application process.

(c) Permit lists the water efficiency requirements as a condition of use.

(d) Agent concurs with the reduction.

(b) **Table 3**, specifying the minimum length of absorption trenches based on soil texture and effective soil depth.

(c) **Table 8**, specifying the minimum distance to permanent groundwater based on soil texture and structure.

(d) Strength of the wastewater. If the strength of the wastewater exceeds the maximum limits for residential strength wastewater the contents of the wastewater are atypical of residential strength wastewater or pose a threat to groundwater, public health, or the environment, the wastewater must be pretreated to acceptable levels before being discharged into a standard or alternative system except for:

(1) Commercial Food Service High Strength Waste Water is acceptable for food service facilities when all required setbacks can be maintained.

(3) Septic tank.

(a) Liquid capacity.

(A) The quantity of daily sewage flow projected for a facility must be estimated from **Table 2**. The agent must determine the projected daily sewage flow for establishments not listed in **Table 2**.

(B) A septic tank that serves a commercial facility must have a liquid capacity of at least two times the projected daily sewage flow unless otherwise determined from **Table 9** or authorized by the agent. In all cases the capacity must be at least 1,000 gallons.

(C) The capacity of a septic tank that serves a single family dwelling must be based on the number of bedrooms in the dwelling in **Table 9**. For a dwelling with 3 or fewer bedrooms, the tank capacity must be at least 1,000 gallons. Septic tank capacity must be at least 1,500 gallons for dwellings with more than 4 bedrooms.

(D) The agent may require a larger capacity than specified in this subsection as needed for special or unique waste characteristics, such as flow patterns, volumes, waste strength, or facility operation.

(b) Installation requirements.

(A) Septic tanks must be installed on a level, stable base that will not settle, and to manufacturers specifications.

(B) Septic tanks located in high groundwater area must be weighted or provided with an antibuoyancy device to prevent flotation in accordance with the manufacturer's instructions.

(C) Tanks must be installed with a watertight riser extending to the ground surface or above. The riser must have a minimum diameter of 20 inches when the soil cover above the tank does not exceed 36 inches. The riser must have a minimum diameter of 30 inches when the soil cover above the tank exceeds 36 inches or when the tank capacity exceeds 3,000 gallons. A gasketed cover must be provided and securely fastened or weighted to prevent unauthorized access. All 20 inch and larger risers shall have a secondary anti intrusion grate installed to help prevent accidental tank entry.

(D) Tanks must be installed in a location that provides access for maintenance.

(E) Where practicable, the sewage flow from an establishment must be consolidated into one septic tank.

(F) The agent may allow a removable plug to be placed in the top of a septic tank inlet sanitary tee if the septic tank discharges directly into a gravity-fed absorption facility.

(G) A demonstration of water tightness may be required for all tanks after installation upon request by the agent.

(H) Unless otherwise allowed by the agent, an effluent filter meeting the requirements of this policy must be installed at the septic tank outlet. A watertight service access riser and cover must be placed above the effluent filter.

(c) Construction Standards. Tank construction must comply with minimum standards contained in this policy.

(4) Distribution techniques. Absorption trenches must be constructed according to one of the methods in this section.

(a) Gravity-fed equal distribution (including loop).

(A) Equal distribution must be used on generally level ground. All trenches and piping must be level within a tolerance of plus or minus 1 inch. All lateral piping must be at the same elevation.

(B) A pressure-operated hydrosplitter may be used to achieve equal distribution.

(C) To determine the total useable area of a looped soil absorption facility, the agent must add the sum of the lengths of the parallel absorption trenches and the lengths of up to two absorption trenches intersecting the parallel trenches.

(b) Serial distribution. Serial distribution is generally used on sloping ground. Each trench must be level within a tolerance of plus or minus 1 inch. Serial distribution may be a combination of equal distribution and serial distribution.

(c) Pressurized distribution systems. Pressurized distribution must satisfy the additional requirements in this policy.

(5) Distribution boxes and drop boxes.

(a) Construction. Construction of distribution boxes and drop boxes must comply with standards in this policy.

(b) Foundation. All distribution boxes and drop boxes must be bedded on a stable, level base.

(c) In all gravity distribution techniques, the connection of the effluent piping to the distribution piping must include at least one distribution or drop box or other device acceptable to the agent as a means for locating and monitoring the absorption field.

(6) Dosing tanks and dosing septic tanks.

(a) Tank construction must comply with the standards in this policy.

(b) The tank must be installed on a stable, level base at a location that provides access for maintenance.

(c) The tank must be provided with at least one watertight service access riser extending to the ground surface or above. The riser must have a minimum diameter of 20 inches when the soil cover above the tank does not exceed 36 inches. The riser must have a minimum diameter of 30 inches when the soil cover above the tank exceeds 36 inches. A gasketed cover must be securely fastened or weighted to prevent unauthorized access.

(d) A tank located in a high groundwater area must be weighted or provided with an antibuoyancy device to prevent flotation in accordance with the tank manufacturer's instructions.

(7) Absorption trenches.

(a) Absorption trenches must be constructed in accordance with the standards in this section unless otherwise authorized by the agent.

(A) Minimum bottom width of trench -- 24 inches.

(B) Minimum depth of trench:

(i) Equal or looped distribution -- 18 inches.

(ii) Serial distribution -- 24 inches.

(iii) Pressure distribution -- 18 inches.

(C) Maximum depth of trench -- 36 inches.

(D) Maximum length of an individual trench -- 150 linear feet, unless otherwise authorized in writing by the agent.

(E) Minimum distance of undisturbed earth between trenches -- 8 feet.

(b) The bottom of the trench must be level within a tolerance of plus or minus 1 inch end to end and level from side to side.

(c) When the sidewall within a trench has been smeared or compacted, sidewalls must be raked to ensure permeability.

(d) Trenches must be constructed to prevent septic tank effluent from flowing backwards from the distribution pipe to undermine the distribution box, the septic tank, or any portion of the distribution unit.

(e) Drain media must extend the full width and length of the trench to a depth of at least 12 inches with at least 6 inches of drain media under the distribution pipe and at least 2 inches over the distribution pipe.

(f) Chamber systems do not receive any surface area reduction compared to gravel media and may require rodent protection as determined by the agent.

(g) Before backfilling the trench, the drain media must be covered with filter fabric, untreated building paper, or other material approved by the agent.

(h) If trenches are installed in sandy loam or coarser soils, filter fabric or other nondegradable material approved by the agent must be used to cover the drain media.

(i) Each leachline shall have a 3 or 4 inch water tight riser that will allow for inspection. The riser shall be located at the ground surface.

(8) Trench backfill.

(a) The installer must backfill the system. Backfill must be carefully placed to prevent damage to the system.

(b) A minimum of 6 inches of backfill is required; in serial systems 12 inches is required.

(c) Backfill must be free of large stones, frozen clumps of earth, masonry, stumps, waste construction materials, or other materials that could damage the system.

(9) Header pipe. Header pipe must be watertight, have a minimum diameter of 3 inches, and be bedded on undisturbed earth. Where distribution boxes or drop boxes are used, the header pipe between the box and the distribution pipe must be at least 4 feet in length and be installed level.

(10) Distribution pipe.

(a) Distribution pipes must have a minimum diameter of 3 inches.

(b) Each disposal trench must have distribution piping that is centered in the trench and laid level within a tolerance of plus or minus 1 inch.

(c) Distribution pipe must comply with standards in this policy.

(d) All perforated pipe must be installed with centerline markings up.

(11) Effluent sewer. The effluent sewer must extend at least 5 feet beyond the septic tank before connecting to the distribution unit. It must be installed with a minimum fall of 4 inches per 100 feet and at least 2 inches of fall from one end of the pipe to the other. In addition, there must be a minimum difference of 8 inches between the invert of the septic tank outlet and either the invert of the header to the distribution pipe of the highest lateral in a serial distribution field or the invert of the header pipe to the distribution pipes of an equal distribution absorption field. A minimum 18-gauge, green-jacketed tracer wire or green color-coded metallic tape must be placed above the effluent sewer pipe.

(12) Curtain drain construction. Unless otherwise authorized by the agent, curtain drains must comply with the following requirements.

(a) Ground slope must be at least 3 percent, or other landform features such as an escarpment must allow for effective drainage.

(b) The curtain drain must extend at least 6 inches into the layer that limits effective soil depth or to a depth adequate to effectively dewater the site.

(c) Trench width must be a minimum of 12 inches.

(d) Perforated pipe must have a minimum diameter of 4 inches and must meet the requirements in this policy.

(e) Perforated pipe must be installed at least 2 inches above the bottom and along the full length of the trench and must be covered by a minimum of 10 inches of drain media.

(f) The curtain drain must be filled with drain media to within 12 inches of the ground surface.

(g) Outlet pipe must be rigid, smooth-wall, solid PVC pipe meeting or exceeding ASTM Standard D-3034 with a minimum diameter of 4 inches. A flap gate or rodent guard must be installed.

(h) Filter fabric must be placed over the drain media.

16.0 Alternative Systems, General

(1) Application requirements. The requirements in this policy for siting, construction, and maintenance of standard subsurface systems apply to alternative systems unless the standards for alternative systems in this policy provide otherwise.

(2) Periodic inspections.

(a) Agents may perform periodic inspections of installed alternative systems. System owners must pay the inspection fee for the inspection upon billing by the agent.

(b) The agent must prepare a report of each inspection listing system deficiencies, corrections required, and timetables for correction, and will provide a copy to the system owner. The agent may follow up as necessary to ensure proper corrections.

17.0 Capping Fills

(1) Criteria for approval. Each site approved for a capping fill system must meet all the following conditions.

(a) Slope does not exceed 12 percent.

(b) Where a permanent water table is present, a minimum separation outlined in **Table 8** must be maintained between the bottom of the absorption trench and the water table.

(c) Effective soil depth is 12 inches or more below the natural soil surface.

(d) Soil texture from the ground surface to the layer that limits effective soil depth is no finer than a clay loam.
(h) A minimum 6-inch separation is maintained between the bottom of the absorption trench and the layer that limits effective soil depth unless less is approved by agent.
(i) The system can be sized according to effective soil depth in **Table 3.**
(j) Pressure distribution may be required if less than a 18-inch separation between soil with rapid or very rapid permeability and the bottom of absorption trenches.

(2) Installation requirements. The cap must be constructed in accordance with the permit. Unless otherwise required by the agent, construction must follow this sequence.

(a) The soil must be examined and approved by the agent before placement of the cap. The texture of the soil used for the cap must be the same textural class as or one textural class finer than the natural topsoil unless otherwise allowed in this policy.
(b) Construction of capping fills must occur between June 1 and October 1 unless otherwise allowed by the agent. The upper 18 inches of natural soil must not be saturated or have a moisture content that causes loss of soil structure and porosity when worked.
(c) The absorption area and the borrow site must be scarified to destroy the vegetative mat.
(d) The system must be installed as specified in the construction-installation permit with a minimum 10-foot separation between the edge of the fill and the absorption facility.
(e) Filter fabric must be used between the drain media and the soil cap, unless otherwise authorized by the agent.
(f) Fill must be applied to the fill site and worked in so that the two contact layers, native soil and fill, are mixed. Fill material must be evenly graded to a final depth of 10 inches over the drain media for an equal system or 16 inches over the drain media for a serial system to allow for appropriate settled depths. Both initial cap and repair cap may be constructed at the same time.
(g) The site must be landscaped according to permit conditions and be protected from livestock, automotive traffic, and other activity that could damage the system.
(h) Each leachline shall have a 3 or 4 inch water tight riser that will allow for inspection. The riser shall be located at the ground surface.

(3) Required inspections. Unless waived by the agent, the following inspections must be performed for each capping fill installed.

(a) Inspection of both the absorption area and borrow material before cap construction for scarification, soil texture, and moisture content.
(b) Pre-cover inspection of the installed absorption facility.
(c) Inspection after the cap is placed to determine adequate contact between fill material and native soil (no obvious contact zone visible), adequate depth of material, and uniform distribution of fill material.
(d) Final inspection after landscaping or other erosion control measures are established.

18.0 Pressurized Distribution Systems

(1) Pressurized distribution systems receiving residential strength wastewater may be permitted on any site meeting the requirements for installation of a standard onsite system and on other sites where this method of effluent distribution is preferable and the site conditions in this policy can be met.
(2) Except following a non-standard OWTS, pressurized distribution systems must be used where depth to soil with rapid or very rapid permeability is less than 20 feet to permanent ground water or as determined in **Table 8**.

(3) Pressurized distribution systems installed in soil with rapid or very rapid permeability in areas with permanent water tables may not discharge more than 450 gallons of effluent per 1/2 acre per day except where:

(a) Groundwater is degraded and designated as a non-developable resource by the applicable Regional Water Quality Control Board; or

(b) A detailed hydrogeological study discloses loading rates exceeding 450 gallons per 1/2 acre per day would not increase the nitrate-nitrogen concentration in the groundwater beneath the site or at any down gradient location to above 5 mg/L.

(4) Materials and construction.

(a) General.

(A) All materials used in pressurized systems must be structurally sound, durable, and capable of withstanding normal stresses incidental to installation and operation.

(B) Pump wiring must comply with applicable building, electrical, or other codes. An electrical permit and inspection from the Modoc County Building Department is required for pump wiring installation.

(C) A single compartment dosing septic tank is required in addition to the primary septic tank.

(b) Pressurized distribution piping. Piping, valves, and fittings for pressurized systems must meet the following minimum requirements.

(A) All pressure transport, manifold, lateral piping, and fittings must meet the requirements in 45.0 Pipe Materials and Construction.

(B) Pressure transport piping must be uniformly supported along the trench bottom. The agent may require the piping to be bedded in sand or other material approved by the agent. A minimum 18 gauge, green-jacketed tracer wire or green color-coded metallic locate tape must be placed above piping.

(C) Orifices must be located on top of the pipe, except as noted in paragraph (b)(I) of this section.

(D) The ends of lateral piping must be constructed with long sweep elbows or an equivalent method to bring the end of the pipe to finished grade. The ends of the pipe must be provided with threaded plugs, caps, or other devices acceptable to the agent to allow for access and flushing of the lateral.

(E) All joints in the manifold, lateral piping, and fittings must be solvent-welded using the appropriate joint compound for the pipe material. Pressure transport piping may be solvent welded or rubber-ring jointed.

(F) A shut off valve must be placed on the pressure transport pipe in or near the dosing tank when appropriate.

(G) A check valve must be placed between the pump and the shut off valve when appropriate.

(H) All orifices must be covered by a protective, durable, noncorrosive orifice shield designed to keep orifices from being blocked by drain media or other system components.

(I) The agent may specify alternate orifice orientation and valve arrangements for conditions such as extended freezing temperatures, temporary or seasonal use, or effluent characteristics.

(J) Where the operation of a pump could result in siphonage of effluent to below the normal off level of the pump, an anti-siphon measure in the form of a non-discharging valve designed for the specific purpose must be used. The anti-siphon valve must be installed and operated in accordance with manufacturer's specifications.

(c) Absorption trench sizing and construction.

(A) A system using absorption trenches must be designed and sized in accordance with the requirements of **Table 3.**

(B) Absorption trenches must be constructed using the specifications for the standard disposal trench unless otherwise authorized by the agent.

(C) The trench must contain drain media at least 12 inches deep, with at least 6 inches of media under the pressure distribution laterals and sufficient media above the laterals to meet or cover the orifice shields to provide a smooth, even cover.

(D) The top of the drain media must be covered with filter fabric or other non-degradable material permeable to fluids that will not allow passage of soil particles coarser than very fine sand. In unstable soils, sidewall lining may be required.

(E) Each leachline shall have a 3 or 4 inch water tight riser that will allow for inspection. The riser shall be located at the ground surface.

(d) Seepage bed construction.

(A) Seepage beds may be used instead of absorption trenches in soil as defined if flows do not exceed 600 gpd.

(B) The effective seepage area must be based on the bottom area of the seepage bed. The area must be at least 200 square feet per 150 gallons per day waste flow.

(C) Beds must be installed at least 18 inches deep (12 inches with a capping fill) but not deeper than 36 inches into the natural soil. The seepage bed bottom must be level.

(D) The top of the drain media must be covered with filter fabric or other non-degradable material that is permeable to fluids but will not allow passage of soil particles coarser than very fine sand.

(E) The bed must contain drain media at least 12 inches deep with at least 6 inches of media under the pressure distribution laterals and sufficient media above the laterals to meet or cover the orifice shields to provide a smooth, even cover.

(F) Pressurized distribution piping must be horizontally spaced not more than 4 feet apart and not more than 2 feet away from the seepage bed sidewall. At least 2 parallel pressurized distribution pipes must be placed in the seepage bed.

(G) A minimum of 10 feet of undisturbed earth must be maintained between seepage beds.

(5) Hydraulic design criteria. Pressurized distribution systems must be designed for appropriate head and capacity.

(a) Head calculations must include maximum static lift, pipe friction, and orifice head requirements.

(A) Static lift where pumps are used must be measured from the minimum dosing tank level to the level of the perforated distribution piping.

(B) Pipe friction must be based upon a Hazen Williams coefficient of smoothness of 150. All pressure piping and fittings on laterals must have a minimum diameter of 2 inches unless submitted plans and specifications show a smaller diameter pipe is adequate.

(C) A minimum head of 5 feet at the remotest orifice and no more than a 10 percent flow variation between the nearest and remotest orifice in an individual unit are required.

(b) The capacity of a pressurized distribution system refers to the rate of flow given in gallons per minute (gpm).

(A) Lateral piping must have discharge orifices drilled a minimum diameter of 1/8 inch and evenly spaced no more than 24 inches apart in coarse textured soils or no more than 4 feet apart in finer textured soils.

(B) The system must be dosed at a rate not to exceed 20 percent of the projected daily sewage flow.

(C) The effect of back drainage of the total volume of effluent within the pressure distribution system must be evaluated for its impact upon the dosing tank and system operation.

(6) The owner of a pressurized distribution system must receive a maintenance manual prior to operation. The maintenance manual shall also be filed with the completed permit at MCEH.

19.0 Seepage Trench System

(1) Criteria for approval. Construction permits may be issued for seepage trench systems on lots if all the following apply:

(a) Lot or parcel size will not accommodate standard subsurface system disposal trenches with a projected flow of 450 gpd.

(b) All other requirements for standard subsurface systems can be met.

(2) Design criteria.

(a) The maximum depth allowed for a seepage trench is 42 inches.

(b) The seepage trench system must be sized according to the following formula: length of seepage trench = 4 x (length of standard disposal trench) divided by (3 + 2D), where D = depth of drain media below distribution pipe in feet. Maximum depth of drain media (D) is 2 feet.

(c) The projected daily sewage flow is limited to a maximum of 450 gallons.

20.0 Conventional Sand Filter Systems

(1) Criteria for approval. Construction of conventional sand filter systems may be approved for single family dwellings or commercial facilities.

(2) Sites approved for sand filter systems. Sand filters may be permitted on any site meeting requirements for standard onsite systems or for pressurized distribution systems if site conditions in this section can be met.

(a) Separation from the permanent groundwater table must satisfy the requirements in this subsection.

(A) The high level attained by a permanent groundwater table is:

(i) Twenty four inches or more below ground surface where:

(I) The ground slope does not exceed 12 percent;

(II) Equal distribution methods are achieved by gravity or the use of either a hydrosplitter or pressurized distribution method; and

(III) A capping fill is placed in accordance with this policy.

(ii) Twenty four inches or more below ground surface where equal distribution methods are achieved by gravity or through the use of a hydrosplitter or pressurized distribution.

(B) Methods used in dewatering systems may be used to achieve separation distances from groundwater.

(C) The minimum backfill depth within the absorption trenches is 6 inches for trenches using equal distribution methods and 12 inches for trenches using serial distribution.

(b) Separation from the permanent groundwater table must satisfy the requirements in this subsection.

(A) The highest level attained by a permanent water table does not exceed the minimum separation distance from the bottom of the absorption area as follows:

(i) For gravel and Soil Group A: sand, loamy sand, sandy loam - 24 inches;

(ii) For Soil Group B: loam, silt loam, sandy clay loam, clay loam - 18 inches if the site can meet the requirements of a Rural Area Consideration in this policy;
(iii) For Soil Group C: silty clay loam, silty clay, clay, sandy clay - 12 inches if the site can meet the requirements of a Rural Area Consideration in this policy.

(B) Shallow absorption trenches placed not less than 12 inches into the original soil profile may be used with a capping fill to achieve separation distances from permanent groundwater. The fill must be placed in accordance this policy.

(C) Methods used in this policy for tile dewatering systems may be used to achieve separation distances from permanent groundwater.

(c) Sand filter systems installed in soils with rapid or very rapid permeability, as defined, in areas with permanent water tables may not discharge more than 450 gallons of effluent per 1/2 acre per day except where:

(A) Groundwater is degraded and designated as a nondevelopable resource by the applicable Regional Water Quality Control Board; or

(B) A detailed hydrogeological study determines loading rates exceeding 450 gallons per ½ acre per day would not increase nitrate-nitrogen concentration in the groundwater beneath the site or any downgradient location to above 5 mg/L.

(d) Sand filter systems may be installed in soils, fractured bedrock, or saprolite diggable with a backhoe if, in the judgment of the agent, the soils, fractured bedrock, or saprolite is permeable to the extent that effluent will absorb adequately and not hinder the performance of the filter or absorption field. The agent may require that an absorption test be conducted to determine the permeability of the bedrock or saprolite. Test methods must be acceptable to MCEH.

(A) Where ground slope does not exceed 12 percent, a capping fill, 12-inch deep trench may be installed in accordance with this policy, except that when installed in fractured bedrock or saprolite, the cap material must be Soil Group B.

(B) Where ground slope exceeds 12 percent but is not greater than 30 percent, a standard 24- inch deep trench may be installed.

(e) A sand filter absorption facility may be installed on slopes of 30 percent or less if other conditions in this section are satisfied.

(f) An absorption facility following a sand filter may be installed on slopes above 30 percent and up to 45 percent where:

(A) Projected daily flow does not exceed 450 gallons and the installation is sized in accordance with sand filter absorption area criteria;

(B) The soil is diggable with a backhoe to a depth of at least 36 inches and 12 inches below the bottom of the trench;

(C) The permanent water table is at least 36 inches below the ground surface and 18 inches below the bottom of the trench; and

(D) A slope stability report is completed by a registered professional.

(g) Setbacks in **Table 1** can be met, except the minimum separation distance between the sewage absorption area and surface waters must be at least 50 feet.

(3) Absorption trenches. Absorption trenches for sand filter absorption facilities must satisfy the requirements in this section.

(a) The minimum length of a standard absorption trench per 150 gallons of projected daily sewage flow is:

(A) For gravel and Soil Group A: sand, loamy sand, sandy loam -- 35 linear feet;

(B) For Soil Group B: loam, silt loam, sandy clay loam, clay loam -- 45 linear feet;

(C) For Soil Group C: silty clay loam, silty clay, sandy clay, clay -- 50 linear feet;

(D) For permeable saprolite or fractured bedrock -- 50 linear feet;

(E) For high shrink-swell clays (Vertisols) -- 75 linear feet.

(b) On lots created before this policy, which do not have sufficient, suitable area for an absorption facility sized in accordance with this section, the agent may allow seepage trenches if:

(A) The design criteria and limitations in Seepage Trenches are met;

(B) The soil is not a high shrink-swell clay; and

(C) All other requirements of this rule are met.

(c) Trench designs in Vertisols.

(A) Absorption trenches in Vertisols must contain 24 inches of drain media and 24 inches of soil backfill in areas with an annual rainfall of 25 inches or less, minimum slopes of 5 percent, and a temporary water table at least 48 inches below the ground surface.

(B) Seepage trenches in Vertisols containing less than 24 inches of drain media may be used if designed in accordance with the criteria and limitations in Seepage Trenches in areas with an annual rainfall of 25 inches or less, minimum slopes of 5 percent, and a temporary water table at least 60 inches below the ground surface.

(4) Bottomless sand filter. Sites may use a bottomless sand filter if the site meets the criteria in this section and section (3) of this rule.

(a) Saprolite; fractured bedrock; gravel; or soil textures of sand, loamy sand, or sandy loam occur in a continuous section at least 2 feet thick in contact with and below the bottom of the sand filter.

(b) The agent determines the saprolite, fractured bedrock, gravel, or soil is permeable over the basal area to the extent that effluent will absorb adequately and not hinder the performance of the filter. The agent may require that an absorption test be conducted to determine the permeability of the basal area. Test methods must be acceptable to MCEH.

(c) The application rate is based on the design sewage flow in **Table 2** and the basal area of the sand.

(d) The water table is at least 24 inches below the ground surface throughout the year, and a minimum 24-inch separation is maintained between a water table and the bottom of the sand filter.

(5) Materials and construction.

(a) All materials used in sand filter system construction must be structurally sound, durable, and capable of withstanding normal installation and operation stresses. Component parts subject to malfunction or excessive wear must be readily accessible for repair and replacement.

(b) All filter containers must be placed over a stable, level base.

(c) In a gravity-operated distribution system, the invert elevation of the outlet end of the underdrain pipe must be at or above the final settled ground elevation of the highest absorption trench.

(d) Piping and fittings for the sand filter distribution system must comply with the requirements for pressure distribution systems in this policy.

(e) Septic tanks, dosing tanks, and other components must comply with the requirements in this policy unless this rule specifies different requirements.

(f) The design and construction requirements in 21.0 Conventional Sand Filter Design and Construction must be met. A bottomless sand filter unit does not require a watertight floor, but does require watertight walls unless otherwise authorized by the agent.

(g) A bottomless sand filter unit does not require a minimum 10-foot separation between the original and replacement unit.

(6) Gravelless absorption method.

(a) Absorption trenches following a sand filter may be constructed without the use of drain media if they meet the criteria in this section.

(A) Absorption trenches must be 12 inches wide by 10 inches deep and incorporate pressurized distribution and a chamber constructed of half sections of 12-inch diameter plastic irrigation pipes (PIP). MCEH may consider deviations to the depth requirement in this rule for alternative drainfield products.

(B) Trenches must be level end to end and across their width.

(C) The agent may allow trenches on minimum 3-foot centers maintaining at least 2 feet of undisturbed earth between parallel trench sidewalls.

(D) Pressurized distribution piping must meet the requirements of this policy, except that orifice shields are not required.

(E) Distribution piping must be perforated with 1/8 inch diameter orifices on maximum 2- foot centers at the 12 o'clock position. The hydraulic design must provide at least a 2-foot residual head at the distal orifice.

(F) The chambers must have an adequate footing to support the soil cover and all normal activity and at a minimum must be constructed of 12-inch PIP rated at 43 pounds per square inch and meeting the appendix standards of ASTM D-2241. Each line must be equipped with a minimum 6-inch diameter inspection port.

(b) Except as noted in subsection (a) of this section, all construction and siting criteria for conventional sand filter systems in this division must be met. This includes but is not limited to the absorption field sizing for sand filter systems in 20.0 Conventional Sand Filter Systems(3) and area sizing for an initial and replacement absorption facility meeting standard trench separations 15.0 Standard Subsurface Systems (7)(a)(E). Plans must verify that a system can be installed on the parcel that will meet the requirements in 20.0 Conventional Sand Filter Systems(3) and 15.0 Standard Subsurface Systems (7)(a)(E) and all other applicable rules before a gravelless absorption method is approved.

(c) A gravelless absorption method may be used wherever this policy allows a standard or alternative-type absorption trench for sand filter systems, except in Vertisols.

(d) A method to prevent burrowing animals from entering the chamber must be provided in areas where this is likely to occur.

(7) Operation and maintenance. Owners of conventional and other sand filter systems must ensure the sand filter and all other components of the system are continuously operated and timely maintained in accordance with the requirements on the permit and this rule.

(a) Owners of conventional and other sand filter systems must comply with the operation and maintenance requirements in this section. The owner of a sand filter system must inspect the septic tank and other components of the system at least annually for sludge accumulation, pump calibration, and cleaning of the laterals. Tanks must be pumped when there is an accumulation of floating scum less than 3 inches above the bottom of the outlet tee fitting, holes or ports, or an accumulation of sludge less than 6 inches below the bottom of the outlet tee fitting, holes or ports. Pump calibration, cleaning of the laterals, and other maintenance must be completed as necessary. (b) Service Contracts. The owner of a residential sand filter system and all sand filter systems serving commercial facilities must maintain a contract, in accordance with 4.0 General Standards, Prohibitions and Requirements (23), with a maintenance provider to serve and maintain the onsite system. A service contract must be entered before the system is installed and must be maintained until the system is decommissioned.

21.0 Conventional Sand Filter Design and Construction

(1) Criteria for sizing. Systems must be sized based on quantities of sewage flow in accordance with this policy.

(2) Minimum filter area:

(a) A sand filter proposed to serve a single family dwelling must have an effective medium sand surface area of at least 360 square feet. If the design sewage flow exceeds 450 gallons per day, the medium sand surface area must be determined with the following equation: Area = projected daily sewage flow divided by 1.25 gallons per square foot.

(b) A bottomless sand filter following an ATT system must have an effective medium sand surface area of at least 250 square feet. If the design sewage flow exceeds 450 gallons per day, the medium sand surface area must be determined with the following equation: Area = projected daily sewage flow divided by 1.80 gallons per square foot.

(c) Sand filter influent may not exceed concentrations of 300 mg/L BOD5, 150 mg/L TSS, or 25 mg/L oil and grease.

(3) Design criteria.

(a) The interior base of the filter container must be level or constructed at a grade of 1 percent or less to the underdrain piping elevation.

(b) Except for sand filters without a bottom, underdrain piping must meet the requirements in this policy and must be installed in the interior of the filter container at the lowest elevation. The piping must be level or on a grade of 1 percent or less to the point of passage through the filter container. The pipe perforations or slots must be oriented in the upright or sideways position.

(c) The base of the filter container with the underdrain piping in place must be covered with a minimum of 6 inches of drain media or underdrain media. Unless waived by the agent, the "underdrain media" proposed for a sand filter must be sieved to determine conformance with the criteria as defined and a report of the analysis must be provided to the agent.

Where underdrain media is used, the underdrain piping must be enveloped in an amount and depth of drain media to prevent migration of the underdrain media to the pipe perforations.

(d) Where drain media is used at the base of the filter, it must be covered by a layer of filter fabric meeting the specifications in 40.0 Filter Fabric. Where underdrain media is used, filter fabric is not required.

(e) A minimum of 24 inches of approved sand filter media must be installed over the filter fabric or underdrain media. The sand filter media must be damp at the time of installation. The top surface of the media must be level. Unless waived by the agent, the sand filter media proposed for each sand filter must be sieve-tested to determine conformance with the criteria "sand filter media" as defined in this policy, and a report of the analysis must be provided to the agent.

(f) A minimum of 3 inches of clean drain or underdrain media is required below the distribution laterals, and sufficient media is required above the laterals to meet or cover the orifice shields to provide a smooth, even cover.

(g) A pressurized distribution system meeting the requirements of 18.0 Pressure Distribution (4) and (5) must be constructed as described in subsection (f) of this section.

(A) Distribution laterals must be spaced a maximum of 30 inches center to center. Orifices must be spaced no more than 30 inches apart.

(B) The ends of the distribution laterals must be designed and constructed to allow flushing of the piping, collectively or individually, using a corrosion-resistant and accessible valve or threaded endcap. The flushed effluent may be discharged to the septic tank or into the sand filter.

(C) The diameters of the distribution manifold and laterals must be at least 1/2 inch in diameter.

(D) A sand filter must be dosed at a rate not to exceed 10 percent of the projected daily sewage flow.

(h) The top of the media in which the pressure distribution system is installed must be covered with filter fabric meeting the specifications in this policy.

(i) The top of the sand filter area must be backfilled with a soil cover free of rock, vegetation, wood waste, and other materials that may harm the filter. The soil cover must have a textural class no finer than loam unless otherwise authorized by the agent. The soil cover must be at least 6 inches and no more than 12 inches deep.

(j) All piping passing through the sand filter container must be watertight.

(4) Container design and construction.

(a) A reinforced concrete container with watertight walls and floors must be used where watertightness is necessary to prevent groundwater from infiltrating into the filter or to prevent the effluent from exfiltrating from the filter except as otherwise allowed in this policy. The container structure may require a building permit for construction.

(b) The container may be constructed of materials other than concrete where equivalent function, workmanship, watertightness, and at least a 20-year service life can be documented.

(A) Flexible membrane liner (FML) materials must have properties at least equivalent to 30 mil unreinforced polyvinyl chloride (PVC) described in 50.0 Flexable Membrane Liners for Sand Filters Treating Septic Tank. For FML materials to be approved for installation:

(i) Field repair instructions and materials must be provided to the purchaser with the liner; and

(ii) The final materials must have factory-fabricated boots suitable for field bonding onto the liner to facilitate the passage of piping through the liner in a waterproof manner.

(B) Where accepted for use, flexible sheet membrane liners must be installed in accordance with this policy.

(C) The backfill around the container must be no steeper than a 3:1 slope (3 feet for every vertical foot) unless otherwise authorized by the agent.

(5) Internal pump option. Where a pump is used to discharge effluent from a sand filter to another treatment unit, a distribution unit, or an absorption facility, the design and construction of the filter may include an internal pump station if the following conditions are met.

(a) The location, design, and construction of the pump station must not conflict with design, construction, and operation of the sand filter system.

(b) The design and construction of the pump, discharge plumbing, controls, and alarm must meet the requirements in 43.0 Dosing Assemblies: Effluent Pumps, Controls and Alarms, and Dosing Siphons except subsections (4)(d) and (4)(h).

(c) The pump and related apparatus must be housed in a corrosion-resistant vault designed to withstand stresses and prevent the migration of drain media, sand, or underdrain media to its interior. The vault must have a durable, affixed floor. The vault must provide watertight access to finished grade with a diameter equal to that of the vault and designed to receive treated effluent from the bottom of the sand filter.

(d) The depth of underdrain media and the operating level of the pump cycle and alarm may not allow effluent to come within 2 inches of the bottom of the sand filter media. The pump off-level may be no lower than the invert of the perforations of the underdrain piping.

(e) The internal sand filter pump must be electrically linked to the sand filter dosing apparatus to prevent effluent from entering the sand filter if the internal sand filter pump fails.

22.0 Recirculating Gravel Filter (RGF)

(1) Siting and absorption area construction criteria.

(a) RGFs approved for treatment standard 1 may be sited and sized as follows.

(A) In areas with permanent groundwater, where 4 feet of separation can be maintained between the bottom of the trench and groundwater and the other criteria in 20.0 Conventional Sand Filter Systems can be met.

(B) On sites meeting criteria for standard onsite systems or for pressurized systems.

(b) RGFs used in conjunction with approved disinfection and approved nitrogen reduction processes and expected to meet treatment standard 2 may be sited and sized as follows.

(A) On sites meeting the criteria for treatment standard 1 in subsection (a) of this section.

(B) In areas with a permanent water table, in accordance with specifications for sand filters in areas with a permanent water table.

(c) Any type of absorption area permitted for a sand filter system, including the gravel-less absorption method, may be permitted for an RGF system.

(2) Design criteria.

(a) Filter design and dosing.

(A) The basal or bottom area of the filter must be sized based on a maximum organic load. For residential strength wastewater that has been pretreated through a septic tank, the maximum hydraulic load allowable is 5 gal/ft2/day.

(B) For BOD5 waste strengths stronger than residential strength wastewater but not exceeding 400 mg/L, the filter size must be increased proportionately.

(C) Higher strength wastewaters must be pretreated or will require special consideration. In no case may the concentration of greases and oil applied exceed 30 mg/L.

(b) Filter media.

(A) Where CBOD5 removal must be at least 85 percent based upon the raw sewage concentration applied to the septic tank and nitrification of wastewater is necessary, a filter media must consist of 3 feet of very fine washed gravel, 100 percent passing a 3/8-inch sieve with an effective size between 3 and 5 millimeters and a uniformity coefficient of 2 or less. Washed means that negligible fines (less than 1.0 percent) pass a No. 10 sieve.

(B) Where additional removal of BOD5 and denitrification is intended or required, a treatment media may consist of 2 feet of very coarse washed sand, 100 percent passing a 3/8-inch sieve with an effective size between 1.5 and 2.5 millimeters and a uniformity coefficient of 2 or less. Washed means that negligible fines (less than 4.0 percent) pass the No. 100 sieve. (C) Sieves of 3/8 inch, 1/4 inch, and Nos. 4, 6, 8, 10, 50, and 100 must be used in gradation analysis.

(D) The permittee must provide fresh samples of the intended media for each project before shipment to the project site. A laboratory gradation analysis must be performed and the gradation data plotted on semi-log paper as a gradation curve. Lab data, gradation curve, and a 5-pound sample of the media must be submitted to the agent for approval. Only approved media may be used.

(c) Filter media must be overlain by a 3-inch bed of 1/2-inch to 3/4-inch washed gravel. The media and gravel may only lightly cover the distribution piping. Unless otherwise authorized, each orifice must be covered by an orifice shield to prevent aerial spray drift.

(d) Filter dosing must use a low pressure distribution piping system operating under adequate head to pressurize the system. The operating head must be a minimum of 5 feet at the remotest orifice and have no more than 10 percent flow variation between the nearest and remotest orifice in an individual unit. Each lateral pipe end must terminate with a screwed plug or cap accessible for removal and flushing. Wherever practical, a valved backflush system must be installed to flush groups of laterals back to a septic tank or elsewhere.

(e) Pressure-distribution piping must be spaced 2 feet center to center in a parallel grid. Orifice spacing must be every 2 feet on laterals. Piping grid edges should be within 1 foot of the filter basal edge.

(f) Filter media must be underlain by a 6-inch bed of a 1/2 to 3/4-inch washed gravel underdrain media. No filter fabric may cover the underdrain media.

(g) Perforated collection pipes must meet requirements in 45.0 Pipe Materials and Construction(2) and be bedded in the underdrain media. Pipes must be at least 4 inches in diameter with no filter fabric wrap. At least 15 lineal feet of collection pipe is required for each 225 square feet of filter basal area.

(h) The filter container must be watertight to suit the design conditions. Underflow must be contained. Groundwater must be excluded. A concrete container may be used. Other materials may be used if equivalent function, workmanship, watertightness, and at least a 20-year service life can be expected.

(3) Recirculation/dilution tank.

(a) A recirculation tank receives septic tank effluent and underflow from the filter. A pumping system at this tank delivers flow to the filter dose piping network according to a project design. The recirculation tank volume measured from tank floor to tank soffit must be at least equal to the projected daily sewage flow volume.

(b) The recirculation ratio at design flow must be at least 4. Recirculation ratio is the daily volume of recycle divided by design daily volume of the wastewater. A fabricated "T" or "Splitter T" float valve located in the recirculation tank must be used whenever possible. Minimum recirculation tank liquid volume must be at least 80 percent of the gross tank volume when a float valve is used. Alternatively, where required and reasonable, a splitter basin using orifice or weir control may be used to divide underflow 20 percent to the absorption field and 80 percent to recycle on a daily basis. This alternative must use orifice control wherever possible. Minimum recirculation tank liquid volume must be at least 50 percent of the required tank volume when a splitter basin is used.

(c) Evaluation of and design for overflow and surge control at the recirculation tank must be included in the design plans.

(d) An audible or visual high water alarm must be included in the recirculation tank immediately below the overflow level. A latching electrical relay must retain the audible or visual alarm until acknowledged by a site attendant.

(e) Parallel pump start/stop electric controls (usually floats) must be installed to correct any unforeseen high liquid level event and keep sewage contained. This pump start function precludes overflow and must operate in parallel with the start/stop function of a timer and must not interfere with or depend upon a timer position.

(f) All areas of the filter must be wetted 48 times a day or every 30 minutes to achieve the recirculation ratio of at least 4 unless otherwise authorized by the agent.

(g) Testing must demonstrate the recirculation tank is watertight. Testing must be witnessed by the designer. Test protocol must be included in the design plans.

(h) Access onto the filter must be restricted by a fence or other effective means. Surface water entry onto the filter must be prevented by design and construction.

(i) Access openings to the recirculation tank must be provided at each end. Larger tanks must have additional openings. The smallest dimension of any access must be 18 inches. Larger openings must be provided if partially obstructed with piping or other objects. Provisions must be made to remove dregs (settleable solids). Pumps must be readily removable and replaceable without demolition of piping or other components.

(4) Operation and Maintenance standards. The owner of an onsite system using an RGF must ensure the RGF and all other components of the onsite system are properly operated and timely maintained or decommissioned.

(5) Operation and maintenance manual. The designer of an RGF system must ensure that comprehensive and detailed operation and maintenance instructions are provided to the onsite system owner at the time of installation. The instructions must emphasize operating and maintaining the entire system within the parameter ranges for which it is designed. The information must be presented in a manner that can be easily under-stood by the owner and include at a minimum:

(a) As-built plans with the name and contact number of the installer;

(b) A description of how the process functions, including diagrams illustrating basic system design and flow path;

(c) A maintenance schedule for all critical components;

(d) Requirements and recommended procedures for periodic removal of residuals from the system;

(e) A detailed procedure for visually evaluating the function of system components;

(f) A description of olfactory and visual techniques for confirming correct process parameters and system performance;

(g) A recommended method for collecting and transporting effluent samples;

(h) Safety concerns that may need to be addressed; and

(i) Emergency contact numbers for maintenance providers and pumpers.

(6) Service contracts. The owner of an RGF system must maintain a contract, in accordance with 4.0 General Standards, Prohibitions and Requirements(23), with a maintenance provider to serve and maintain the onsite system. A service contract must be entered before the system is installed and must be maintained until the system is decommissioned.

23.0 Steep Slope Systems

(1) General conditions for approval. Construction-installation permits may be issued for steep slope systems serving single-family dwellings on slopes in excess of 30 percent if all the following requirements can be met.

(a) Slope does not exceed 45 percent.

(b) The soil is well-drained with no evidence of saturation to a depth of 60 inches.

(c) The soil has a minimum effective soil depth of 60 inches.

(2) Construction requirements.

(a) Seepage trenches must be installed at a minimum depth of 30 inches and a maximum depth of 36 inches below the natural soil surface on the downhill side of the trench and must contain a minimum of 18 inches of drain media and 12 inches of native soil backfill.

(b) The system must be sized at a minimum of 75 linear feet per 150 gallons projected daily sewage flow.

24.0 Tile Dewatering System

(1) General conditions for approval. Construction permits may be issued for tile dewatering systems if the following requirements can be met.

(a) The site has a natural outlet that will allow a field tile installed on a proper grade around the proposed absorption facility to daylight above annual high water.

(b) Soils are silty clay loam or coarser textured and drainable.

(c) Soils must have a minimum effective soil depth of at least 72 inches in soils with permanent groundwater unless otherwise authorized by the agent.

(d) Slope does not exceed 3 percent.

(e) All other requirements for the system, except depth to groundwater, can be met. After the field collection drainage tile is installed, the groundwater levels must conform to the requirements of this policy for the desired treatment and system.

(2) Construction requirements.

(a) Field collection drainage tile must be installed on a uniform grade of 0.2 to 0.4 feet of fall per 100 feet. The tile drainage trench must be constructed to the minimum depth required in the approved site evaluation report.

(b) A field collection drainage tile trench must be constructed at least 12 inches wide.

(c) Maximum drainage tile spacing must be 70 feet center to center.

(d) The minimum horizontal separation distance between the drainage tile and absorption facility must be 20 feet.

(e) Field collection drainage tile must be rigid, smooth-wall, perforated pipe or other pipe material approved by the agent with a minimum diameter of 4 inches.

(f) Field collection drainage tile must be enveloped in clean drain media or underdrain media to within 30 inches of the soil surface in soils with permanent groundwater. Drain media must be covered with filter fabric, treated building paper, or other nondegradable material approved by the agent.

(g) Outlet tile must be rigid, smooth-wall, solid PVC pipe meeting or exceeding ASTM Standard D- 3034 with a minimum diameter of 4 inches. A flap gate or rodent guard may be required by the agent.

(h) A silt trap with a 12-inch minimum diameter must be installed between the field collection drainage tile and the outlet pipe unless otherwise authorized by the agent. The bottom of the silt trap must be at least 12 inches below the invert of the drainage pipe outlet.

(i) The discharge pipe and tile drainage system are integral parts of the system but do not need to meet setback requirements to property lines, wells, streams, lakes, ponds, or other surface waterbodies.

(j) Before issuing a final site evaluation report approving the site, the agent may require demonstration that a proposed tile dewatering site can be effectively drained.

(k) The absorption facility must use equal or pressurized distribution.

25.0 Split Waste Method

Criteria for approval. In a split waste method, wastes may be disposed of as follows.

(1) Black wastes may be disposed of by use of nonwater or water carried plumbing units such as incinerator toilets or compost toilets approved by the State Building Codes Division. Recirculating oil flush toilets are not approved at this time in Modoc County due to current septage disposal methods.

(2) Gray water may be disposed of by discharge to:

(a) An existing onsite system which is not failing;

(b) A new onsite system with a soil absorption facility 2/3rds normal size if a full-size initial absorption area and replacement absorption area of equal size are available; or
(c) A public sewerage system.

26.0 Nonwater-Carried Systems

(1) A person may not cause or allow the installation, placement, or use of a nonwater-carried waste disposal facility without a letter of authorization or permit from the agent, except in accordance with this section.

(a) A sewage disposal service business registered in Modoc County may install portable toilets without written approval of the agent if all other requirements of this rule when **Table 7** setbacks are met.

(2) Nonwater-carried waste disposal facilities may be approved for temporary or limited-use areas, including but not limited to recreation parks, camp sites, seasonal cabins, farm labor camps, or construction sites, if:

(a) All liquid wastes can be handled in a manner to prevent a public health hazard and to protect public waters; and
(b) The separation distances in **Table 7** can be met; and
(c) Permit conditions in section 16.0 (1) and (2) are adhered; and
(d) Use must be compatible with Modoc County zoning and building ordinances.

(3) Construction. Non-water carried waste disposal facilities must be constructed in accordance with Nonwater-carried Waste Disposal Facilities, Materials, and Construction.

(4) Maintenance. Nonwater-carried waste disposal facilities must be maintained to prevent health hazards and pollution of public waters.

(5) General. A person may not place water-carried sewage in nonwater-carried waste disposal facilities. The contents of nonwater-carried waste disposal facilities must be removed by a registered sewage disposal service with a pumper and taken to an authorized treatment site.

(6) Pit privy.

(a) Unsealed earth-pit type privies may be approved where the highest level attained by groundwater is not closer than 20 feet below the bottom of the privy pit.
(b) The privy must be constructed as per this policy and to prevent surface water from running into the pit.
(c) When the pit becomes filled to within 16 inches of the ground surface, a new pit must be excavated and the old pit backfilled with at least 2 feet of earth.
(d) Rural Area Consideration (1) applies.
(e) Cannot be used for a seasonal dwelling larger than one bedroom or a dwelling that has more than limited use during the year.
(f) Use must be compatible with Modoc County zoning and building ordinances.
(g) A minimum 200’ separation from surface water.

(7) A person may not cause or allow the installation or use of a portable toilet unless the pumping or cleaning of the portable toilet is covered by a valid and effective contract with a pumping service registered with MCEH. Each portable toilet must display the name of the pumping service responsible for servicing.

27.0 Cesspools and Seepage Pits

(1) A person may not construct new cesspool sewage disposal systems in Modoc. Any Cesspool in use shall apply for a major repair permit immediately upon adoption of this policy.
(2) Seepage pit sewage disposal systems may be used only to serve existing sewage loads and replace existing failing seepage pit and cesspool systems on lots that are too small to accommodate a standard system or other alternative onsite system.
(3) Construction requirements.

(a) Each seepage pit must be installed in a location to facilitate future connection to a sewerage system when such facilities become available.
(b) Maximum depth of seepage pits is 15 feet below ground surface.
(c) The seepage pit depth must terminate at least 10 feet above the water table.

28.0 Holding Tanks

(1) Criteria for approval. Installation of a holding tank system requires a construction-installation permit. A construction-installation permit may be issued for sites that meet all the following conditions.

(a) Permanent use.

(A) The site cannot be approved for installation of a standard subsurface system.
(B) No community or areawide sewerage system is available or expected to be available within five years.
(C) The tank is intended to serve a small industrial or commercial building, an occasional use facility such as a county fair or a rodeo, or a seasonal dwelling.
(D) Unless otherwise allowed by MCEH, the projected daily sewage flow is not more than 200 gallons.
(E) Setbacks required for septic tanks can be met.

(2) Operations and maintenance. At all times the holding tank is being used, the owner of the tank must maintain a service contract with a MCEH approved sewage disposal service to provide for regular inspection and pumping of the holding tank.
(3) Design and construction requirements. Holding tanks must comply with the following requirements:

(a) Plans and specifications for each holding tank proposed to be installed must be submitted to the agent for review and approval.
(b) Each tank must:

(A) Have a minimum liquid capacity of 1,500 gallons;
(B) Comply with tank standards in this policy; except for two compartment requirement.
(C) Be located and designed to facilitate removal of contents by pumping
(D) Be equipped with both an audible and a visual alarm placed in locations acceptable to the agent to indicate when the tank is 75 percent full. Only the audible alarm may be user cancelable;
(E) Have no overflow vent at an elevation lower than the overflow level of the lowest fixture served; and
(F) Be designed for antibuoyancy if test hole examination or other observations indicate seasonally high groundwater may float the tank when empty.

(4) Special requirements. The application for a holding tank permit must include:

(a) A copy of a contract with a licensed sewage disposal service that requires the tank to be pumped periodically at regular intervals or as needed and the contents treated in a manner and at a facility approved by the agent; and

(b) Evidence that the owner or operator of the proposed treatment facility will accept the pumping for treatment.

29.0 Alternative Treatment Technologies (ATTs)

(1) Criteria for approval. Construction-installation permits may be issued for onsite systems incorporating alternative treatment technologies (ATTs) for single family dwellings and commercial facilities if the following criteria are met:

(a) MCEH has listed the ATT, including brand and model or type where applicable, for use in onsite systems pursuant to section (2) of this rule.

(b) The ATT meets the performance and model selection criteria specified for the proposed use in section (4) of this rule.

(c) The site meets the appropriate siting criteria in section (8) of this rule, and the agent has approved the site.

(d) The owner of the property served by the onsite system incorporating the ATT has a written service contract as required in section (14) of this rule.

(2) ATT listing and delisting.

(a) MCEH will maintain a list of ATTs that meet the performance requirements in section (3) of this rule.

(b) Any person may submit an application for listing an ATT. The application must include:

(A) Documentation that the ATT meets the performance requirements in section (3) of this rule;

(B) Documentation that the ATT has been tested to NSF/ANSI as a class 1 or equivalent residential wastewater treatment system;

(C) A guide for inspecting the ATT installation;

(D) A plan for training agents on inspection of the ATT and training and certifying system installers on installation of the ATT;

(E) A plan for training and certifying maintenance providers on system maintenance for the ATT;

(F) Documentation that the ATT complies with sections (5)-(7) and (9) of this rule; and

(G) The alternative technology review fee.

(c) MCEH will approve applications to list ATTs that MCEH determines meet the performance requirements in section (3) of this rule under normal operating conditions. ATTs will be listed by brand and model or type for the treatment standards they achieve.

(d) MCEH may approve ATTs that vary from standards in this policy.

(e) MCEH may remove ATTs from the list if it determines the requirements for approval in subsection (c) of this section are no longer satisfied or if:

(A) Ten percent or more of systems under 10 years of age fail;

(B) The manufacturer fails to submit the annual report in section (g) of this rule by the date specified by MCEH; or

(C) The manufacturer goes out of business; or

(D) No manufacture approved service provider is available in Modoc County.

(f) MCEH may choose to accept another county or state approval in lieu of an application and testing in Modoc County.

(3) Performance testing and standards for listing ATTs.

(a) Product testing. ATTs must be tested according to the product standards and testing protocols of NSF/ANSI Standard No. 40 for residential wastewater treatment systems – 2013, NSF/ANSI Standard No. 245 for nitrogen reduction – 2012, or another NSF/ANSI protocol

approved by MCEH. For purposes of demonstrating performance to the fecal coliform concentration in treatment standard 2, the ATT shall be followed by a nonchlorinating disinfection device that has been tested according to NSF/ANSI Standard No. 46 – 2012, or the ATT be tested by collecting and analyzing influent and effluent grab samples at a minimum frequency of three days per week and the same duration (26 consecutive weeks) and hydraulic loadings (design and stress loadings) as the NSF/ANSI sample collection requirements for the BOD5, CBOD5, and TSS parameters. The testing must be performed by an ANSI accredited, third-party testing and certification organization whose accreditation is specific to onsite wastewater treatment products.

(b) Product performance. An ATT must produce effluent quality equal to or better than "treatment standard 1 or 2" as defined.

(4) ATT model type and size selection. The model, type, and size of the ATT proposed for a system must be consistent with manufacturer recommendations and match the daily design wastewater flow anticipated from the dwelling or facility.

(5) Access ports.

(a) At a minimum, the ATT must have ground-level access ports sized and located to facilitate installation, removal, sampling, examination, maintenance, and servicing of components or compartments that require routine maintenance or inspection. Access ports must facilitate:

(A) Visually inspecting and removing mechanical or electrical components;

(B) Removing components that require periodic cleaning or replacement;

(C) Visually inspecting and collecting samples; and

(D) Removing (manual or pumping) accumulated residuals.

(b) Access ports must be protected against unauthorized intrusion. Acceptable protective measures include but are not limited to padlocks or covers that can be removed only with tools.

(6) Malfunction, failure sensing, and signaling equipment.

(a) The system must be designed to prevent the passage of untreated waste into the absorption field if the plant malfunctions.

(b) The ATT must possess a mechanism or process capable of detecting:

(A) Failure of electrical and mechanical components that are critical to the treatment process; and

(B) High liquid level conditions above the normal operating specifications.

(c) The ATT must possess a mechanism or process capable of notifying the system owner of failures. The mechanism must have circuits separate from pump circuits and deliver a visible and audible signal.

(A) The visual alarm signal must be conspicuous at a distance of 50 feet from the system and its appurtenances.

(B) The audible alarm signal strength must be between 70 and 90 dbA at 5 feet and discernible at a distance of 50 feet from the system and its appurtenances.

(C) The visual and auditory signals must continue to function in the event of electrical, mechanical equipment, or hydraulic malfunction of the system. The audible signal may be disabled for service as long as the visual signal remains active while cause for the alarm is identified and alleviated.

(d) A clearly visible label or plate with instructions for obtaining service must be permanently located near the failure signal.

(7) Data plate.

(a) The ATT must have permanent and legible data plates located on:

(A) The front of the electrical control box if the ATT has an electrical control box or panel; and

(B) The tank, aeration equipment assembly, or riser at a location accessed during maintenance cycles and inspections.

(b) Each data plate must include:

(A) Manufacturer's name and address;

(B) Model number;

(C) Serial number (required on one data plate only);

(D) Rated daily hydraulic capacity of the system; and

(E) The performance expectations as determined by performance testing and evaluation.

(8) Siting and absorption area construction criteria.

(a) ATTs approved for treatment standard 1 may be sited and sized as follows.

(A) In areas with permanent groundwater, where 4 feet of separation can be maintained between the bottom of the trench and groundwater and the other criteria in 20.0 Conventional Sand Filter Systems can be met.

(C) On sites meeting criteria for standard onsite systems or for pressurized systems defined in this policy.

(b) ATTs used in conjunction with approved disinfection and approved nitrogen reduction processes and approved for treatment standard 2 may be sited and sized as follows.

(A) On sites meeting the criteria for treatment standard 1 in subsection (a) of this section.

(B) In areas with a permanent water table, in accordance with specifications for sand filters in areas with a permanent water table in 20.0 Conventional Sand Filter Systems.

(c) Any type of absorption area permitted for a sand filter system, including the gravel-less absorption method, may be permitted for an ATT system.

(9) Limited warranty. The ATT manufacturer must:

(a) Warrant all components of the ATT to be free from defects in material and workmanship for a minimum of two years from the date of installation; and

(b) Fulfill the terms of the warranty by repairing or exchanging any components that the manufacturer determines may be defective.

(10) Installation. ATTs must be installed in accordance with the manufacturer's instructions and this division. The installer must be certified by the ATT manufacturer to install the system and provide written certification to the agent that the ATT component was installed in accordance with the manufacturer's instructions and this rule.

(11) Sampling ports. A sampling port must be designed, constructed, and installed to provide easy access for collecting a free falling or undisturbed sample from the effluent stream. The sampling port may be located within the ATT or other system component (such as a pump chamber) if the wastewater stream being sampled is representative of the effluent stream from the ATT.

(12) Operation and maintenance standards. The owner of an ATT system must ensure the ATT and all components of the onsite system are properly operated and timely maintained or decommissioned and the effluent standards in section (3) of this rule are met.

(13) Owner's manual. The designer of each onsite system using an ATT must provide a comprehensive owner's manual prepared by the manufacturer or designer to the system owner, manufacturer's representative, installer, and if requested, the agent before or at the time of installation. The manual may be a collection of individual system component manuals and must include information on system specifications, system installation, operation and maintenance, and troubleshooting and repair. The information must be presented in a manner that can be easily under-stood by the owner.

(14) Service contracts.

(a) The owner of an ATT system must maintain a contract, in accordance with this policy, with a maintenance provider to serve and maintain the onsite system. A service contract must be entered before the system is installed and must be maintained until the system is decommissioned.

(b) A maintenance provider must be certified by the manufacturer to provide service on an ATT.

30.0 Absorption Trenches in Saprolite

(1) General conditions for approval. An onsite system construction-installation permit may be issued for a single family dwelling on a site with soil shallow to saprolite if requirements in either subsection (a) or (b) of this section can be met.

(a) If slope does not exceed 30 percent:

(A) The saprolite is sufficiently weathered so that it can be textured, crushed, or broken with hand pressure to a depth of 24 inches and can be dug from a test pit wall with a spade or other hand tool to a depth of 48 inches; and

(B) Clay films or iron coatings with moist values of 5 or less and moist chromas of 4 or more, organic coatings with moist values of 3 or less and moist chromas of 2 or more, or both occur on fracture surfaces of the saprolite to a depth of 48 inches.

(b) If slope exceeds 30 percent but not 45 percent:

(A) The saprolite is sufficiently weathered so that it can be textured, crushed, or broken with hand pressure to a depth of 24 inches and can be dug from a test pit wall with a spade or other hand tool to a depth of 60 inches; and

(B) Clay films or iron coatings with moist values of 5 or less and moist chromas of 4 or more, organic coatings with moist values of 3 or less and moist chromas of 2 or more, or both occur on fracture surfaces of the saprolite to a depth of 60 inches.

(c) For saprolite derived from granite or other deposits where clay films or iron coatings are not present, a soil absorption test and the degree of consolidation may be used to predict hydraulic conductivity of the saprolite. Agents may approve sites where conductivity is sufficiently high to ensure adequate drainage.

(2) Construction Requirements.

(a) Standard absorption trenches must be installed where slope does not exceed 30 percent.

(A) The trenches must be installed at a minimum depth of 24 inches and a maximum depth of 30 inches below the natural soil surface and contain 12 inches of filter material and a minimum of 12 inches of native soil backfill.

(B) The trenches must be sized at a minimum of 100 linear feet (24 inch width) per 150 gallons projected daily sewage flow.

(b) Seepage trenches must be installed where slope exceeds 30 percent but not 45 percent.

(A) Seepage trenches must be installed at a minimum depth of 30 inches and at a maximum depth of 36 inches below the natural soil surface and contain a minimum of 18 inches of filter material and 12 inches of native soil backfill.

(B) Seepage trenches must be sized at a minimum of 75 linear feet (24 inch width) per 150 gallons of projected daily sewage flow.

31.0 Geographic Area Special Considerations.

(1) No area in Modoc County has been identified at this time.

32.0 Monitoring and Identification of High Risk Areas Due to Imapacts From OWTS, Local Hydrogeology, and Site Conditions

(1) No area in Modoc County has been identified to be negatively impacted by OWTS. Modoc County Environmental Health is committed to monitoring water quality information submitted by realtors in an effort to identify vulnerable areas that warrant further investigation. Information that warrants investigation shall be remitted in the annual report to the applicable regional water quality control board.
(2) MCEH shall follow local ordinance pertaining to size requirement for parcel creation, requirements of OWTS, and potential impacts to water quality.
(3) A refined water quality monitoring program that will provide relevant information to the function of OWTS in Modoc County is planned to be developed by year five when the State Water Board renews the waiver. At this time MCEH will endeavor to compile data relevant to OWTS and comply with State Water Resources Control Board policy section 9.3.3.
(4) Upon completion of MCEH geographic information system (GIS) training and system installation, areas that do not meet the criteria for a standard OWTS shall be identified on a GIS layer with limiting criteria identified.

33.0 Impaired Water Bodies Attributed to OWTS

(1) No 303(d) listed water body impaired by OWTS has been identified in Modoc County at this time.

34.0 Rural Area Consideration

(1) An agent may approve a new design and construction of standard or alternative systems that depart from this policy in designated rural zones if the following requirements are met.
(a) A minimum parcel size of at least 20 acres.
(b) The parcel as proposed or existing is at least 20 acres and does not have an accessible area approvable for a standard onsite system.
(c) The parcel cannot be reduced to less than 20 acres.
(d) The permit is for an onsite system designed to serve a single family dwelling or a commercial facility allowed in the zone with a flow no greater than 600 gpd.
(e) The onsite system will unlikely create a public health hazard or pollute public waters.
(f) Requiring strict compliance with standards, would in the judgment of the agent, be unreasonable, burdensome, or impractical.

(2) An agent may approve a repair application for an existing system that would deviate from the standards in this policy if all the following conditions are met:
(a) The permit is for an onsite system designed to serve a single family dwelling or a commercial facility allowed in the zone with a flow no greater than 600 gpd.
(b) Prior to failure, there is no evidence the previous OWTS created an unforeseen public health hazard.
(c) There is no substantial evidence that the replacement OWTS will pollute public waters or create a public health hazard.

(d) With no financial assistance mechanism in place, as per the intent of AB 885, to assist the property owner. Requiring strict compliance with standards, would in the judgment of the agent, be economically unreasonable.
(e) The following conditional use is stated on the repair permit: "The repaired OWTS does not meet current policy to best protect public health and water quality." If a system evaluation is required at the time of property sale, MCEH will state "The repaired OWTS does not meet current standards and has an increased risk to negatively impact public health or water quality."

35.0 Community Systems

(1) A person may not construct a community system without a permit.
(2) Plans for all community systems must describe the system and how it is to be operated, maintained, and financed.
(3) Community systems must satisfy the siting criteria in this division for standard or alternative systems.
(4) Operation responsibility. Municipalities, homeowner associations, or associations of unit owners must operate and maintain community systems including inspections annually or as required by a permit, or these rules.
(5) Community systems discharging more than 10,000 gpd shall apply to the applicable regional water quality control board for permitting and compliance.
(6) Community systems shall comply with local zoning ordinances and be approved by the Modoc County Planning Department.

36.0 Sewage Disposal Service Registrations

(1) Registration required. A person may not perform sewage disposal services or advertise or represent himself as being in the business of performing such services without a valid Registration issued by MCEH to perform those services. A separate Registration is required for each business, organization, or other person conducting sewage disposal services.
(2) The duration of a sewage disposal service Registration may not exceed three years following the date of issuance. MCEH may issue Registrations for periods of less than three years to adjust for a calendar year renewal. MCEH will provide Registrations written notice of the expiration date assigned and date application for renewal is due.
(3)Requirements for pumping vehicles and equipment. A Registratione who pumps onsite systems must ensure that all pumping vehicles and equipment comply with the following requirements.

(a) Tanks used for pumping or transporting septage must:

(A) Have a liquid capacity of at least 550 gallons, except that tanks for equipment used exclusively for pumping chemical toilets not exceeding 80 gallons capacity must have a liquid capacity of at least 150 gallons;
(B) Be of watertight metal construction;
(C) Be fully enclosed; and
(D) Have suitable covers to prevent spillage.

(b) Vehicles used for pumping or transporting septage must be equipped with either a vacuum or other type of pump that is self-priming and will not allow seepage from the diaphragm or other packing glands.
(c) The sewage hose on vehicles must be drained, capped, and stored in a manner that will not create a public health hazard or nuisance.
(d) The discharge nozzle must be:

(A) Provided with either a camlock quick coupling or threaded screw cap;
(B) Sealed by threaded cap or quick coupling when not in use;
(C) Located to minimize flow or drip onto any portion of the vehicle;
(D) Protected from accidental damage or breakage.

(e) Pumping equipment must not have spreader gates.

(f) Each vehicle must at all times be supplied with a pressurized wash-water tank, disinfectant, and implements for cleanup.

(g) Except as specified in subsection (h) of this section or otherwise authorized in writing by the agent, pumping equipment must be used exclusively for pumping sewage disposal facilities.

(h) The following may be pumped or serviced using pumping equipment without written authorization, whether or not they are connected to an onsite system or a centralized community sewer system: pump stations, lift stations, food grease tanks, vaults or tanks used for domestic sewage not contaminated with industrial or hazardous waste, and spills and backups of uncontaminated domestic sewage.

(i) Chemical toilet pumping equipment may not be used for any other purpose if the pump tank has a liquid capacity of less than 550 gallons.

(j) Equipment must be maintained in a reasonably clean condition at all times and must be operated in a manner that does not create a public health hazard or nuisance.

(4) Vehicle identification. The onsite sewage disposal services Registratione must identify vehicles as follows.

(a) The Registratione's name or assumed business name must be displayed on both sides of the vehicle or the attached tank and on both sides of a tank trailer.
(A) Letters must be at least 3 inches high unless otherwise authorized by DEQ.
(B) Letters must be in a color contrasting with the background.

(b) Tank capacity must be printed on both sides of the tank.
(A) Letters must be at least 3 inches high unless otherwise authorized by DEQ.
(B) Letters must be in a color contrasting with the background.

(5) Septage management requirements. The Registratione and all persons managing septage:

(a) Must avoid spilling sewage or septage during pumping, cleaning, or transport and must immediately clean up any spill and disinfect the spill area.

(b) Must dispose of septage and sewage only in disposal facilities approved by MCEH.

(c) At all times during pumping, transport, or disposal of septage, must possess origin-destination records for sewage disposal services rendered.

(d) Must maintain on file for at least 3 years complete origin-destination records for sewage disposal services rendered. The records must be made available for review upon the request of MCEH. Origin and destination records must include the following information for each pumping, transport, and disposal occurrence:
(A) Source of septage, including name and address;
(B) Specific type of material pumped;
(C) Quantity of material pumped;
(D) Name and location of disposal site where septage was deposited;
(E) Quantity of material deposited; and
(F) The Registration numbers or vehicle numbers assigned by the Registratione for all vehicles or trailers used for pumping, transport, and disposal.

(e) Must transport septage in a manner that will not create a public health hazard or nuisance

(f) Must possess a current septage management plan approved by MCEH. The plan must be kept current, with any revisions approved by MCEH before implementation.

CONSTRUCTION STANDARDS

37.0 Tank Construction

The following construction and manufacturing requirements apply to all septic tanks, holding tanks, dosing tanks, multiple-compartment combination septic and dosing tanks, and dosing septic tanks manufactured for use in Modoc County.

(1) Compartments.

(a) Single-compartment tank can only be used as a dose tank.

(b) Multiple-compartment tanks must comply with the following requirements:

(A) The liquid capacity of the first compartment must be at least 2/3 of the total required liquid capacity, as measured from the invert elevation of the first compartment's outlet Tee fitting;

(B) A compartment may not have an inside horizontal dimension of less than 24 inches.

(c) The liquid depth of any compartment must be at least 30 inches. Liquid depths greater than 72 inches may not be considered in determining the working liquid capacity unless the tank has a capacity greater than 3,000 gallons.

(2) Service access manhole. All tanks must have a service access manhole measuring at least 18 inches across its shortest dimension in each compartment.

(3) Watertightness. After installation, all tanks must be watertight. The installer must test each tank for watertightness by filling the tank to a point at least 2 inches above the point of riser connection to the top of the tank. During the test there may be no more than a one gallon leakage over a 24 hour period. The tank manufacturer must deliver watertight tanks and should test each tank for watertightness before the tank is shipped from the manufacturing plant.

(4) If the tank manufacturer does not fully assemble the tank, as with a two-piece concrete tank, the manufacturer must provide the bonding and sealing agents and an instruction manual for assembling the tank.

(5) Structure: All tanks must be able to support an earth load of at least 300 pounds per square foot when the maximum coverage does not exceed 3 feet. Tanks installed with more than 3 feet of cover must be reinforced to support the additional load. Lateral load must be 62.4 pcf of equivalent fluid pressure (EFP). Tanks must be able to withstand long-term external hydrostatic loads in addition to soil loads. Internal hydrostatic pressures must be omitted to allow for septage pumping during critical groundwater conditions. A 2,500 pound wheel load concentrated over the critical elements of the tank shall also be considered.

(6) Service access riser and cover. All tanks must be manufactured to accommodate installation of a watertight service access riser above one service access manhole. The riser must have a minimum nominal diameter of 20 inches when tank burial depths do not exceed 36 inches. Tanks designed for burial depths deeper than 36 inches must also be designed to accommodate installation of a 30-inch minimum diameter service access riser above each service access manhole. A gasketed riser cover must be provided and securely fastened or weighted to prevent unauthorized access.

(7) Inlet and outlet Tee fittings.

(a) The inlet and outlet Tee fittings must be of Schedule 40 P.V.C. plastic, Schedule 40 ABS plastic, or other equally durable materials approved by the department with a minimum diameter of 4 inches.

(b) The distance between the inlet and outlet Tee fittings in a single-compartment tank must at least equal the liquid depth of the tank.

(c) The inlet and outlet Tee fittings in a single compartment tank, where applicable, must be located at opposite ends of the tank. The inlet Tee fitting must be readily accessible by way of a watertight, 8-inch minimum diameter riser (with cover) and access hole positioned directly above the inlet Tee. The fittings must be attached in a watertight manner acceptable to the

department.

(d) The inlet fitting in all single-compartment tanks, except dosing tanks, and in each compartment of multiple-compartment tanks, must be a "sanitary tee" extending at least 6 inches above and at least 12 inches below the normal high and low liquid levels, respectively.

(e) The outlet Tee fitting, holes, or ports provided in a vault or outlet effluent filter must be positioned to withdraw effluent horizontally from the clear zone at an elevation measured from the inside bottom of the tank to 65 to 75 percent of the lowest operating liquid depth. The net area of the ports must be at least 6 square inches. The outlet fitting in single-compartment tanks and in each compartment of multiple-compartment tanks must extend at least 6 inches above the highest normal liquid depth to provide scum storage. When the single-compartment tank is used as a holding tank, dosing septic tank, or dosing tank, the outlet Tee fitting must be provided with a watertight plug or omitted. The outlet Tee fitting may also be plugged or omitted in the last compartment of a multiple-compartment tank when a pump or siphon is placed in that last compartment.

(f) Ventilation must be provided through the fittings by means of a 2-inch minimum space between the top of the inlet Tee fittings and the adjacent tank surfaces.

(g) The invert of the inlet fitting must be at least 1 inch and preferably 3 inches above the invert of the outlet fitting or the highest normal liquid level.

(h) A convenient means of monitoring sludge and scum accumulation must be provided, with access extending to ground level.

(i) The tank manufacturer must provide with each Tee fitting an appropriate coupler that will provide a watertight connection between the fittings and the building and effluent sewer pipes.

(8) At least 10% of the inside volume of a tank must be above the highest normal liquid level to provide scum storage and reserve.

(9) Tanks shall be constructed of concrete, fiberglass, or other noncorrosive materials approved by the department. All tanks shall be approved a California Registered Engineer and be supplied with a specification sheet detailing design and installation criteria.

(10) All prefabricated tanks must be marked on the uppermost tank surface over the outlet with the liquid capacity of the tank, the burial depth limit, date of manufacture, and the manufacturer's full business name.

(11) A septic tank used for primary treatment or two compartment tank cannot be used as a dosing tank.

38.0 Distribution Boxes

(1) Distribution boxes must be constructed of concrete, fiberglass, or other materials acceptable to the department.

(2) Distribution boxes must be constructed of durable, watertight materials resistant to deterioration and be designed to accommodate watertight connections for the effluent sewer and header pipes. The top, walls, and bottom of concrete distribution boxes must be at least 1-1/2 inches thick. All distribution boxes must be able to support an earth load of at least 200 pounds per square foot.

(3) The invert elevation of all outlets must be the same and must be at least 2 inches below the inlet invert.

(4) Each distribution box must be provided with a sump extending at least 2 inches below the invert of the outlets unless otherwise authorized by the department.

39.0 Drop Boxes

(1) Drop boxes must be constructed of concrete, fiberglass, or other materials acceptable to the department.

(2) Drop boxes must be constructed of durable, watertight materials resistant to deterioration and be

designed to accommodate watertight connections for the effluent sewer and header pipes. The top, walls, and bottom of concrete drop boxes must be at least 1-1/2 inches thick. All drop boxes must be able to support an earth load of at least 200 pounds per square foot.

(3) The inverts of the inlet and overflow port must be at the same elevation. The invert of the header pipe port(s) leading to the absorption trench(es) must be 6 inches below the inlet invert unless otherwise approved by the agent.

40.0 Filter Fabric

Except as otherwise allowed by the department, filter fabric used as a barrier between the lower lens of drain media and the medium sand in a conventional sand filter system must meet the following specifications:

(1) Material synthetic fabric, either spunbonded or woven.
(2) Burst strength not less than 25 psi.
(3) Air permeability not less than 500 cfm per sq. ft.
(4) Water flow rate not less than 500 gpm per sq. ft. at 3 inches of head.
(5) Hydrophilic surface reaction to water.
(6) Equivalent opening size of 70 to 100 sieve.
(7) Chemical properties:
    (a) Nonbiodegradable.
    (b) Resistant to acids and alkalies within a pH range of 4 to 10.
    (c) Resistant to common solvents.

41.0 Diversion Valves

(1) Diversion valves must be constructed of material that is durable, corrosion-resistant, watertight, and designed to accommodate the inlet and outlet pipes in a secure and watertight manner.
(2) Diversion valves must be constructed with access to finished grade and large enough to provide for ease of operation and service of valve.

42.0 Dosing Tanks

(1) Dosing tanks must be single compartment meet the material standards described for septic tanks.
(2) Each dosing tank employing one or more pumps must have a minimum liquid capacity equal to the projected daily sewage flow for flows up to 1,200 gallons per day. The department will determine tank sizing for dosing tanks with projected daily sewage flows greater than 1,200 gallons per day. The liquid capacity of dosing tanks must be as measured from the invert elevation of the inlet fitting.
(3) Each dosing tank must be provided with a service access manhole having a minimum horizontal measurement of 18 inches.
(4) Each dosing tank proposed to serve a commercial facility containing more than one pump or siphon must be provided with at least one service access manhole that provides adequate space to construct, install, service, and operate the equipment in accordance with the requirements of the permit or manufacture.
(5) The installation manual must include additional information about siphon selection, installation of the pump or siphon screen, pump control and alarm levels, and the watertight pass-through methods for electric wiring and pipe.
(6) Dosing tanks with siphons must be designed and sized for each specific project. The tank manufacturer must specify the type or model of siphon, screen, and related apparatus that are compatible with each dosing tank.
(7) The inlet fitting must extend below the lowest operating level of the pump or siphon.

43.0 Dosing Assemblies: Effluent Pumps, Controls and Alarms, and Dosing Siphons

(1) Design and equipment must emphasize ease of maintenance, longevity, and reliability of components and must be proven suitable by operational experience, test, or analysis acceptable to the department.

(2) Easy means of electrical and plumbing disconnect must be provided. All apparatus must be constructed and installed to facilitate ease of service without having to alter any other component.

(3) Component materials must be durable and corrosion-resistant such as Type 316 stainless steel, suitable plastics, or 85-5-5-5 bronze.

(4) Pumps, Siphons, Controls, and Alarms. All pumps, siphons, controls and related apparatus must be field tested under working conditions and found to operate and perform satisfactorily. Electrical components used in onsite systems must comply with applicable requirements of the State of California Electrical Code and the standards in this section.

(a) Motors must be continuous-duty with overload protection.

(b) Pumps must have durable impellers of bronze, cast iron, or other materials approved by the department.

(c) Submersible pumps must be provided with an easy, readily accessible means of electrical and plumbing disconnect and a noncorrosive lifting device as a means of removal for servicing.

(d) Except where specifically authorized in writing by the agent, the pump or siphon must be placed within a corrosion-resistant screen or vault with a filtering device that extends into or above the tank's service access manhole. The screen or filtering device must have at least 12 square feet of surface area, with 1/8-inch openings. In lieu of the screen, the agent may allow other methods with equal or better performance in preventing the passage of suspended solids to the pump or siphon.

(e) Pumps must be automatically controlled by float switches with a minimum rating of 12 amps at 115 volts A.C. or by a department-approved, equally reliable switching mechanism. Except as otherwise required in this division, the switches must be installed so that no more than 20% of the projected daily sewage flow is discharged each cycle. The pump "off" level must be set to maintain the liquid level above the top of the pump or to the designer and pump manufacturer's specifications.

(f) An audible and visual high water level alarm with manual silence switch must be located in or near the building served by the pump. Only the audible alarm may be user-cancelable. The switching mechanism within a dosing tank or chamber controlling the high water level alarm must be located so that at time of activation the tank has a remaining volume equal to 1/3 or more of the system's design flow, as measured below the invert of the inlet, for effluent storage. The alarm and pump must be on separate circuits. Commercial applications using duplex pumps are not subject to the 1/3 storage reserve requirement.

(g) When a system has more than one pump, the department may require the pumps to be wired into the electrical control panel to function alternately after each pumping cycle. If either pump should fail, the other pump will continue to function while the high water level alarm activates. A cycle counter must be installed in the electrical control panel for each pump.

(h) All pump installations must be designed with adequate sludge storage volume below the effluent intake level of the pump.

(i) All commercial systems with a design flow greater than 600 gallons must be constructed in duplex (two or more alternating pumps) unless otherwise authorized in writing by the department. Controls must be provided such that an alarm will signal when one of the pumps malfunctions.

(j) All pumps serving commercial systems must be operated through a pre-manufactured electrical

control panel. A means of monitoring pump performance through the use of elapsed-time meters and cycle counters is required.

(k) Where multiple pumps are operated in series, an electrical control panel must be installed to prevent the operation of a pump or pumps preceding a station that experiences a high level alarm event.

(5) Dosing Siphons. Dosing siphons used in onsite systems must comply with the following minimum requirements.

(a) The siphon must be constructed of corrosion-resistant materials.

(b) The siphon must be installed within a compatible tank in accordance with the siphon manufacturer's recommendations.

(c) The siphon manufacturer must provide installation and maintenance instructions to the owner.

(d) The installation must include a device that tracks the operation of the siphon by measuring cycle events and records them by means of an event counter mounted within the dwelling or structure served.

44.0 Effluent Filters

(1) Effluent filters used in onsite systems must meet the following criteria.

(a) Filters must be of durable, resilient, corrosion resistant, non-degradable materials resistant to deformation under normal operating conditions.

(b) Filters must be designed to prevent the escape of sludge or scum during normal operation and in the event of a malfunction, including filter clogging.

(c) The filter must retain all particles greater than 3/16 inch.

(d) The filter assembly must baffle the sludge and scum layers to prevent the escape of gross solids during sludge bulking or gas ebullition.

(e) Filters must be designed and positioned to allow for easy, trouble-free removal from and reinstallation to the screen apparatus from the assembly.

(f) The assembly must be capable of withstanding stresses placed upon it by installation, operation, and service.

(g) The assembly in the septic tank must perform as a conventional tank outlet that meets the requirements of 37.0 Tank Construction(6) when the filter is removed.

(h) The filter must be designed to handle the flow of the system it is to serve without excessive maintenance. For a single family dwelling, maintenance is considered "excessive" when the filter requires service or cleaning more than one time per year. Service must be performed each time the tank is pumped and in accordance with the manufacturer's specifications.

(i) To obtain department approval, the manufacturer of an effluent filter must provide the department with the necessary technical data to show that the design and materials comply with this rule. The manufacturer must provide an operation and maintenance manual with each unit distributed.

(j) Effluent filter units external to the tank must be watertight.

45.0 Pipe Materials and Construction

(1) Effluent Sewer Pipe: The effluent sewer must be constructed with materials in conformance with state building sewer standards. The effluent sewer pipe must have a minimum diameter of 3 inches. When the septic tank is fitted with an effluent filter, the minimum nominal diameter of piping may be reduced to 1-1/4 inches.

(2) Underdrain pipe. Underdrain pipe must meet or exceed the requirements for Class 125 PVC pressure pipe as identified in ASTM Specification D 2241. The pipe and fittings must be marked as required by ASTM Specification D 2241. The underdrain pipe must be perforated in accordance with subsection (4)(d) of this rule or with 1/4-inch slots cut halfway through the pipe at 4 inches center to center.

(3) Polyvinyl chloride (PVC) pressure transport pipe, pressure manifolds, and pressure lateral pipe and fittings must meet or exceed the current requirements for Class 160 PVC 1120 pressure pipe as identified in ASTM Specification D 2241. The pipe and fittings must be marked as required by ASTM Specification D 2241. For pipe diameters of 1 inch or less, the minimum pressure rating is 200 pounds per square inch (psi). For pipe diameters greater than 1 inch, the minimum pressure rating is 160 psi.

(4) Distribution and Header Pipe and Fittings.

(a) Polyethylene distribution pipe in 10 foot lengths and header pipe in lengths of 10 feet or greater must meet the current ASTM Specification F 405. Pipe and fittings must also pass a deflection test withstanding 350 pounds per foot without cracking or collapsing using the method in ASTM 2412. Pipe used in absorption facilities must be heavy duty. Markings must meet requirements in ASTM F 405.

(b) Polyvinyl chloride (PVC) distribution and header pipe and fittings must meet the most current ASTM Specification D 2729. Pipe and fittings must pass a deflection test withstanding 350 pounds per foot without cracking or collapsing using the method found in ASTM 2412. Markings must meet requirements in ASTM Specification D 2729.

(c) Polyethylene smooth wall distribution and header pipe in 10-foot length and fittings must meet the most current ASTM Specification F 810. Pipe and fittings must also pass a deflection test of 350 pounds per foot without cracking or collapsing by using the method found in ASTM 2412. Markings shall meet the requirements in ASTM Specification F 810, Section 9.

(d) The three types of plastic pipe described above must have two rows of holes spaced 120 degrees apart and 60 degrees on either side of a center line. For distribution pipe, a line of contrasting color must be provided on the outside of the pipe along the line furthest away and parallel to the two rows of perforations. Durable ink markings must cover at least 50% of the pipe. Markings may consist of a solid line, letters, or a combination of the two. Intervals between markings must not exceed 12 inches. The holes of each row may not be more than 5 inches on center and must have a minimum diameter of 1/2 inch.

46.0 Nonwater-Carried Waste Disposal Facilities, Materials, and Construction

Privies and Portable Toilet Shelters

(1) Privies and portable toilet shelters must comply with the following general requirements.

(a) Structures must be free of hostile surface features, such as exposed nail points, sharp edges, and rough or broken boards, and must provide privacy and protection from the elements.

(b) Building ventilation must be equally divided between the bottom and top halves of the room and must be adequate to allow for the free escape of gases and odors. All vents must be screened with 16 mesh screen of durable material.

(c) Buildings must be of fly-tight construction and must have self-closing doors with an inside latch.

(d) Pits, tanks, or vaults must be vented to the outside atmosphere by a flue or vent stack having a minimum inside diameter of 4 inches. Vents must extend at least 12 inches above the roof.

(e) Interior floors, walls, ceilings, partitions, and doors must be finished with readily cleanable, impervious materials resistant to wastes, cleansers, and chemicals. Floors and risers must be constructed of impervious material and prevent entry of vermin.

(2) Portable Toilet Shelters. Portable toilet shelters may be prefabricated, skid mounted, or mobile. In addition to the requirements in section (1) of this rule, portable toilet shelters must:

(a) Provide at least 1 square foot of screened ventilation to the outside atmosphere for each seat;

(b) Provide at least 9 square feet of floor space for each seat;

(c) Be furnished with a toilet tissue holder for each seat;

(d) Be located in areas readily accessible to users and to pumping and cleaning services; and
(e) Provide separate compartments with doors and partitions or walls of sufficient height to insure privacy in multiple-unit shelters except that separate compartments are not required for urinals.

47.0 Unsealed Earth Pits for Privies

(1) The pit must be constructed with material and in a manner to prevent rapid deterioration, provide adequate capacity, and facilitate maintenance under ordinary use.
(2) Unless otherwise approved by the agent, the pit must provide a capacity of 50 cubic feet for each seat installed in the privy building and must be at least 5 feet deep. The area within 16 inches of the surface grade may not be counted as part of the 50 cubic-foot capacity.
(3) Pit cribbing must fit firmly and be in uniform contact with the earth walls on all sides and must rise at least 6 inches above the original ground line and descend to the full depth of the pit. Pit cribbing below the soil line may be omitted in rock formations.

48.0 Self-Contained Nonwater-Carried Toilet Facilities

(1) General Standards. All self-contained, nonwater-carried toilet facilities must comply with the following requirements.
(a) They must have water-tight chambers constructed of reinforced concrete, plastic, fiberglass, metal, or other material of acceptable durability and corrosion resistance, approved by the department, and designed to facilitate the removal of the wastes.
(b) Black wastes must be stored in an appropriate chamber until removal for final treatment elsewhere. Wastes must be removed from the chamber whenever necessary to prevent overflow.
(c) Chemicals containing heavy metals such as copper, cadmium, and zinc, must not be used in self-contained toilet facilities.
(d) All surfaces subject to soiling must be impervious, easily cleanable, and readily accessible.
(2) Vault Toilet Facilities.
(a) The capacity of vaults must be at least 350 gallons or, in places of employment, 100 gallons per seat.
(b) Caustic must be added routinely to vault chambers to control odors.
(3) Chemical Toilet Facilities.
(a) Toilet bowls must be constructed of stainless steel, plastic, fiberglass, ceramic, or other material approved by the department.
(b) Waste passages must have smooth surfaces and be free of obstructions, recesses, or cross braces that would restrict or interfere with flow of black wastes.
(c) Biocides and oxidants must be added to waste detention chambers at rates and intervals recommended by the chemical manufacturer and approved by the department.
(d) Chambers and receptacles must provide a minimum storage capacity of 50 gallons per seat.
(e) Portable shelters housing chemical toilets must display the business name of the licensed sewage disposal service that is responsible for servicing them.

49.0 Construction of Gray Water Waste Disposal Systems

(1) A gray water waste disposal system must consist of a minimum 1,000 gallon tank that complies with tank construction standards in this policy, and an absorption trench designed to 2/3 capacity of a standard OWTS system. All other components shall meet the material qualities described within this policy or specifically approved by MCEH.
(2) Absorption trenches shall be constructed to prevent surfacing effluent and contamination of a permanent groundwater table. Gray water systems are designed as a water saving system that is

intended to reduce the use of potable water for landscape irrigation.
(3) No black waste can be disposed of in the gray water system. Black waste can be handled by a non-water system, holding tank, or standard OWTS design.

50.0 Flexible Membrane Liners for Sand Filters Treating Septic Tank Effluent

(1) Unsupported polyvinyl chloride (PVC) must have the following properties (Property -- Test Method).
- (a) Thickness -- ASTM D1593, Para 9.1.3, 30 mil, minimum
- (b) Specific Gravity (minimum) -- ASTM D792, Method A
- (c) Minimum Tensile Properties (each direction) -- ASTM D882
  - (A) Breaking Factor (pounds/inch width) -- Method A or B (1 inch wide), 69
  - (B) Elongation at Break (percent) -- Method A or B, 300
  - (C) Modulus (force) at 100% Elongation (pounds/inch width) -- Method A or B, 27
- (d) Tear Resistance (pounds, minimum) -- ASTM D1004, Die C, 8
- (e) Low Temperature -- ASTM D1790, -20° F
- (f) Dimensional Stability (each direction, percent change maximum) -- ASTM D1204, 212° F;, 15 min., ±5
- (g) Water Extraction -- ASTM D1239, 0.35% max
- (h) Volatile Loss -- ASTM D1203,Method A, 0.7% max
- (i) Resistance to Soil Burial (percent change maximum in original value) -- ASTM D3083:
  - (A) Breaking Factor, -5
  - (B) Elongation at Break, -20
  - (C) Modulus at 100% Elongation, ±10.
- (j) Bonded Seam Strength (factory seam, breaking factor, ppi width) -- ASTM D3083, 55.2
- (k) Hydrostatic Resistance -- ASTM D751, Method A, 82.

(2) Installation Standards.
- (a) Patches, repairs, and seams must have the same physical properties as the parent material.
- (b) Site considerations and preparation.
  - (A) The supporting surface slopes and foundation to accept the liner must be stable and structurally sound with appropriate compaction. Particular attention must be paid to the potential of sink hole development and differential settlement.
  - (B) Soil stabilizers such as cementations or chemical binding agents may not adversely affect the membrane; cementations and chemical binding agents may be potentially abrasive agents.
- (c) Only fully buried membrane liner installation may be considered to avoid weathering.
- (d) Unreinforced liners have high elongation and can conform to irregular surfaces and follow settlements within limits. Unreasonable strain reduces effective thickness and may reduce life expectancy by lessening the chemical resistance of the thinner (stretched) material. Every effort must be made to minimize the strain (or elongation) anywhere in the flexible membrane liner.
- (e) Construction and installation.
  - (A) Surface condition.
    - (i) Preparation of earth subgrade. The prepared subgrade must be of soil types no larger than Unified Soil Classification System (USCS sand (SP) to a minimum of 4 inches below the surface and free from loose earth, rock, fractured stone, debris, cobbles, rubbish and roots. The surface of the completed subgrade must be properly compacted, smooth, uniform, and free from sudden changes in grade. Importing suitable soil may be required.
    - (ii) Maintenance of subgrade. The earth subgrade must be maintained in a smooth, uniform, and compacted condition during installation of the lining.

(B) Climatic conditions.

(i) Temperature. Placing liner outside the desirable temperature range must be avoided. The desirable temperature range for membrane installation is 42° F. to 78° F. Lower or higher temperatures may have an adverse effect on transportation, storage, field handling, and placement, seaming, and backfilling; and attaching boots and patches may be difficult.

(ii) Wind. Placing the liner in high wind must be avoided. Wind may have an adverse effect on liner installation such as interfering with liner placement. Mechanical damage may result. Cleanliness of areas for boot connection and patching may not be possible. Alignment of seams and cleanliness may not be possible.

(iii) Precipitation. Seaming, patching, and attaching "boots" must be done under dry conditions. When field seaming is adversely affected by moisture, portable protective structures and other methods must be used to maintain a dry sealing surface. Proper surface preparation for bonding boots and patches may not be possible.

(C) Structures. Where penetrations are necessary, liners must be attached to pipes with a mechanical type seal supplemented by a chemically compatible caulking or adhesives to effect a liquid-tight seal. Maximum compaction must be provided in the area adjacent to pipes to compensate for any settlement.

(D) Liner Placement.

(i) Size. The final cut size of the liner must be carefully determined and ordered to generously fit the container geometry without field seaming or excess straining of the liner material.

(ii) Transportation, handling, and storage. Transportation, handling, and storage procedures must be planned to prevent material damage. Material must be stored in a secured area and protected from adverse weather.

(iii) Site inspection. A site inspection must be carried out by the agent and the installer before liner installation to verify surface conditions and other conditions important to installation.

(iv) Deployment. Panels must be positioned to minimize handling. Seaming should not be necessary. Bridging or stressed conditions must be avoided with proper slack allowances for shrinkage. The liner must be secured to prevent movement and promptly backfilled.

(v) Anchoring trenches. The liner edges must be secured frequently in a backfilled trench.

(vi) Field seaming. Field seaming, if absolutely necessary, must be attempted only when weather conditions are favorable. The contact surfaces of the materials must be clean of dirt, dust, moisture, or other foreign materials. The contact surfaces must be aligned with sufficient overlap and bonded in accordance with the suppliers recommended procedures. Wrinkles must be smoothed out and seams must be inspected by nondestructive testing techniques to verify their integrity. As seaming occurs during installation, the field seams must be inspected continuously, and any faulty area repaired immediately.

(vii) Field repairs. Traffic on the lined area must be minimized. Any necessary repairs to the liner must be patched using the same lining material and following the recommended procedure of the supplier.

(viii) Final inspection and acceptance. Completed liner installations must be visually checked for punctures, rips, tears, and seam discontinuities before placement of any backfill. At this time the installer must also manually check all factory and field seams with an appropriate tool. In lieu of or in addition to manual checking seams, either of the following tests may be performed:

(I) Wet Test. The lined basin must be flooded with water to the 1-foot level after inlets and outlets have been plugged. There may not be any loss of water in a 24 hour test period.

(II) Air Lance Test. All bonded seams must be checked using a minimum 50 PSI (gauge) air supply directed through a 3/16 inch (typical) nozzle held not more than 2 inches from the seam edge and directed at the seam edge. Riffles indicate unbonded areas within the seam or other undesirable seam construction.

Table 1
Minimum Separation Distances

Items Requiring Setback	From Subsurface Absorption Area Including Replacement Area	From Septic Tank and Other Treatment Units, Effluent Sewer and Distribution Units
Groundwater Supplies and Wells*	100'	50'
Surface Waters - Year round**	100'	50'
Surface Waters - Seasonal**	50'	50'
Groundwater Interceptors	20'	10'
Irrigation Canals - Lined	25'	25'
Irrigation Canals - Unlined (Upgradient/Downgradient)	25'/50'	25'/50'
Downgradient Escarpments/Cuts Which Intersect Layers that Limit Effective Soil Depth	50'	25'
Downgradient Escarpments/Cuts Which Do Not Intersect Layers that Limit Effective Soil Depth	25'	10'
Property Lines	5'	10'
Water Lines	10'	10'
Foundation Lines of Any Building	10'	5'
Underground Utilities	10'	-

*Additional setbacks for public water systems are in section 9.4.10, 9.4.11, and 9.4.12 in the State Water Resources Control Board OWTS Policy.
** Does not prevent stream crossings of pressure effluent sewers.

If the Health Officer has determined that there is inadequate area to obtain the distances required in Table 1, he or she may nevertheless approve the construction of the system if it is a replacement system and a reasonable low risk assessment to public health and the environment can be made.

TABLE 2
Quantities of Sewage Flows

Type of Establishment		Gallons Per Day*	Minimum gallons Per Establishment Per Day*
Airports		5 (per passenger)	150
Bathhouses and swimming pools		10 (per person)	300
Camps: (4 persons per campsite, where applicable	Campground w/central comfort stations	35 (per person)	700
	W/ flush toilets, no showers	25 (per person)	500
	Construction camps- semi permanent	50 (per person)	1000
	Day camps- no meals served	15 (per person)	300
	Resort camps (day/night) w/ limited plumbing	50 (per person)	1000
	Luxury camps	100 (per person)	2000
Churches		5 (per seat)	150
Country clubs (per resident member)		100 (per resident member)	2000
County clubs (per non-resident member present)		25 – (per non-resident member)	0
Dwellings	Boarding houses	150 (per bedroom)	600
	Boarding houses- additional for non-residential boarders	10 (per person)	0
	Rooming Houses	80 (per person)	500
	Condominiums, multiple family dwellings – including apartments	300 (per unit)	900
	Single Family dwellings	300 (not exceeding 2 bedrooms)	300
	Single family dwellings with 3 or more bedrooms	75 (fourth & each succeeding bedroom)	450
Factories (exclusive of industrial waste- w/shower facilities)		35 (per person per shift)	300
Factories (exclusive of industrial waste- w/o shower facilities)		15 (per person per shift)	150
Hospitals		250 (per bed space)	2500
Hotels with private baths		120 (per room)	600
Hotels without private baths		100 (per room)	500
Institutions other than hospitals		125 (per bed space)	1250
Laundries-self service		500 (per machine)	2500
Mobile home parks		250 (per space)	750
Motels – w/ bath, toilet, and kitchen waste		100 (per bedroom)	500
Motels- w/o kitchens		80 (per bedroom)	400
Picnic Parks- toilet waste only		5 (per picnicker)	150
Picnic Parks- w/ bathhouses, showers, and flush toilets		10 (per picnicker)	300
Restaurants		40 (per seat)	800
Restaurants – single service		2 (per customer)	300
Restaurants – w/ bars and/or lounges		50 (per seat)	1000
Schools	Boarding	100 (per person)	3000
	Day – w/o gyms, cafeterias, or showers	15 (per person)	450
	Day – w/ gyms, cafeterias and showers	25 (per person)	750
	Day – w/ cafeteria, but w/o gyms or showers	20 (per person)	600
Service Stations		10 (per vehicle served)	500
Swimming pools and bathhouses		10 (per person)	300
Theater	Movie	5 (per seat)	300
	Drive-In	20 (per car space)	1000
Travel Trailer Parks – w/o individual water and sewer hookups		50 (per space)	300
Travel Trailer Parks – w/ individual water and sewer hookups		100 (per space)	500
Workers	Construction – as semi permanent camps	50 (per person)	1000
	Day – at schools and offices	15 (per shift)	150

*The agent may reduce the above design flow estimates as provided in this policy.

TABLE 3

Design Soil Application Rates*

Absorption rates per 150 gallons projected daily sewage flow determined from soil texture verses effective soil depth.

	Linear Leach Length Calculation per Bedroom						Bottom Area + sidewall 24" + 12" = 36"		
	Linear feet 2'			Linear feet 3' (chamber only)			Equivalent Application Rate (gal/day/ft2)		
	Soil Group			Soil Group			Soil Group		
Effective Soil Depth	**A**	**B**	**C**	**A**	**B**	**C**	**A**	**B**	**C**
18" to less than 24"	**125**	**150**	**175**	**95**	**115**	**130**	**0.40**	**0.33**	**0.29**
24" to less than 36"	**100**	**125**	**150**	**75**	**95**	**115**	**0.50**	**0.40**	**0.33**
36" to less than 48"	**75**	**100**	**125**	**55**	**75**	**95**	**0.67**	**0.50**	**0.40**
48"+	**50**	**75**	**125**	**40**	**55**	**95**	**1.00**	**0.67**	**0.40**

Soil Group A**	Sand, Loamy Sand, Sandy Loam.
Soil Group B	Sandy Clay Loam, Loam, Silt Loam, Silt, Clay Loam.
Soil Group C	Silty Clay Loam, Sandy Clay, Silty Clay, Clay

*Agent may reduce the above design flow criteria as provided in this policy.

* If sand grains are fine or very fine, site according to Group B soils.

Table 4

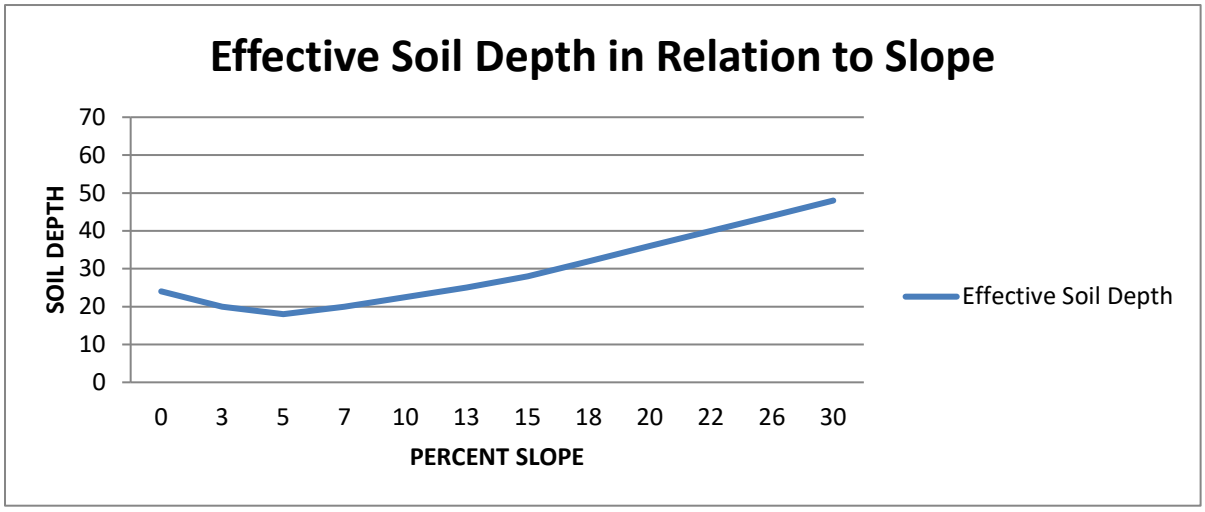


Table 5
Soil Textural Classification Chart

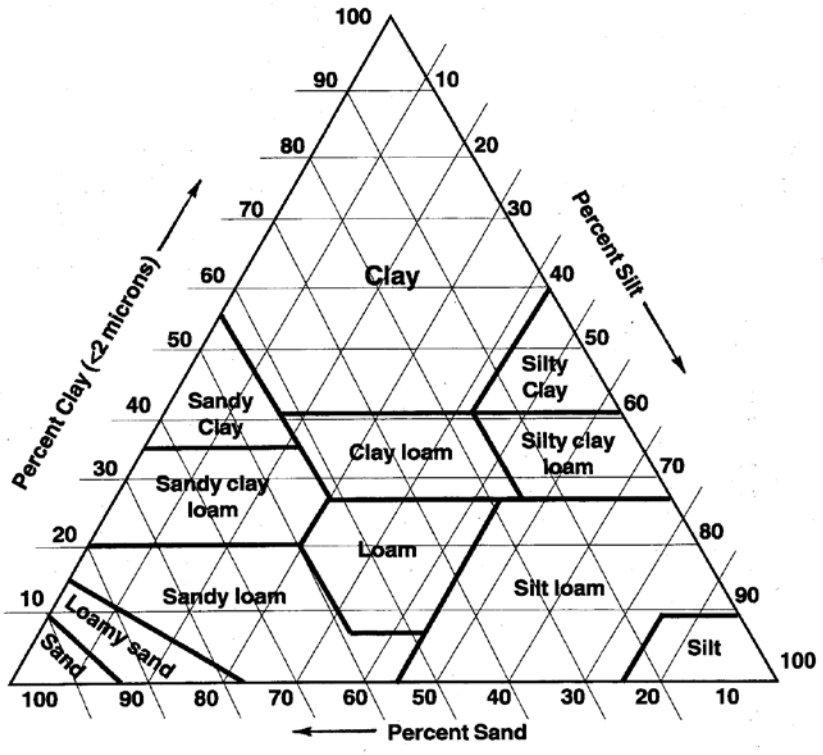


Table 6

USDA Soil Classification Sizes of Soil Separates

Particle	Sieve Size	Millimeters
Clay	-	0.002
Silt	270	0.050
Very Fine Sand	200	0.075
	140	0.10
Fine Sand	60	0.25
Medium Sand	35	0.50
Coarse Sand	18	1.00
Very Coarse Sand	10	2.00
Fine Gravel	4	4.75
	3/8"	9.50
	1/2"	12.50
Coarse Gravel	3"	76.20
Cobbles	-	-

Table 7

Minimum Separation Distances for Nonwater -Carried Waste Disposal Facilities

	Self-Contained Nonwater-Carried Waste Disposal	Unsealed Earth Type Privies, Graywater Waste Disposal Sump and Seepage Chambers
Groundwater supplies including springs and cisterns	50'	100'
Surface public waters, excluding intermittent streams	50'	100'
Intermittent streams	50'	50'
Property line	25'	25'

Table 8

Minimum Depths to Permanent Groundwater According to Soil Type and Percolation Rate

Percolation Rate	Soil Type	Minimum Depth From Bottom of Dispersal System*
1 MPI< TO ≤ 5 MPI	A -(structureless coarse sand)	Twenty (20) feet
5 MPI< TO ≤ 60 MPI	A/B	Eight (8) feet
60 MPI< TO ≤ 120 MPI	C	Five (5) feet

*Minimum Depth can be reduced by 50% if a confining layer below the leach line is > 6 inches, has a permeability rate > 120 MPI or structure is massive, and (at a minimum) pressure distribution is used. Separation to permanent groundwater can be reduced to 24" in any soil type with supplimental treatment of effluent to Treatment Standards 1 or 2 as defined in this policy and approved by the agent.

Table 9
Septic Tank Sizing Criteria

Dwelling - Number of Bedrooms	1 to 4	5 to 6
Tank Size	1,000 gal	1,500 gal
More than 6 bedrooms and all other facilities use the following design formulas:		
1) Waste/sewage flow, up to 1,500 gallons/day Flow x 1.5 = septic tank size		
2) Waste/sewage flow, over 1,500 gallons/day Flow x 0.75 + 1125 = septic tank size		

ATTACHMENTS

Attachment 1

Annual Regional Water Quality Control Board Report

Modoc County Page ____of _____

Complaints Concerning OWTS **Reporting Period_____**

MCEH Compalint Number	Applicable Regional Board	Date	Issue	APN	T-R-S	Permit Info/#	Resolution

Attachment 2

Annual Regional Water Quality Control Board Report

Modoc County Page ____of _____

OWTS Permit Activity **Reporting Period**_____

MCEH Permit Number	Date	Type of Permit	Designed Use	T-R-S	APN	Applicable Regional Board	SWRCB Tier	ATT Y/N	Maintenece Contract Required Y/N

Attachment 3

Annual Regional Water Quality Control Board Report

Modoc County

Modoc OWTS Septage Registration Program **Reporting Period_____** Page ____of _____

Registrant Name	MCEH Registration Number	Application Date	Issue Date	Experation Date	Annual Septage Disposal (gallons)	Applicable Regional Board

Attachment 4

MODOC COUNTY ENVIRNIMENTAL HEALTH OWTS

SITE EVALUATION INSPECTION FORM

EVAL NUMBER:

APPLICANT:				RELATION TO SITE:
EVALUATOR:		DATE:		PARCEL SIZE:
SUBDIVISION:	T	R	S	APN:
LAT		LON		

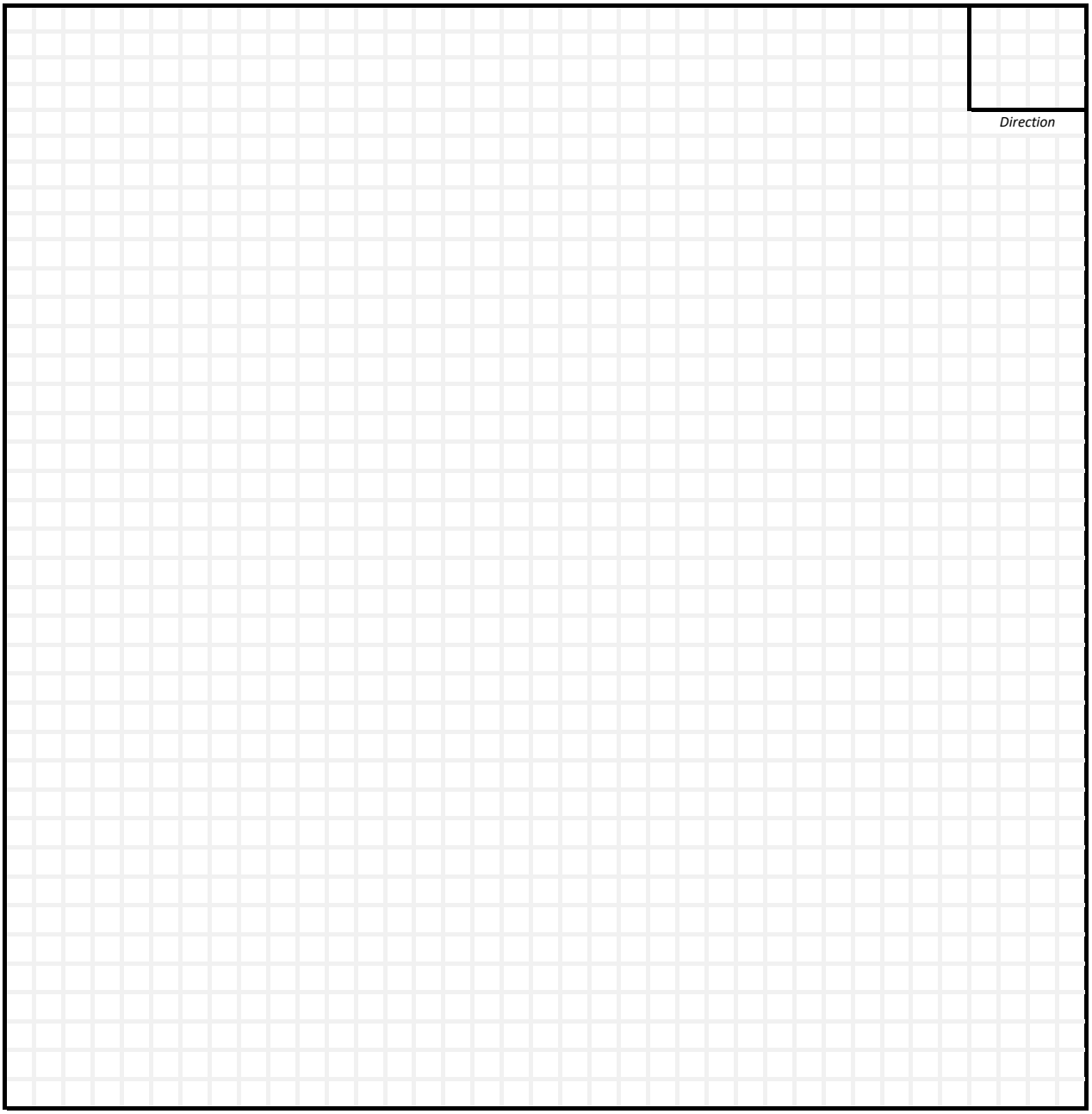
PIT	DEPTH	TEXTURE	COLOR	NOTES
1				
2				
3				
4				
5				
6				
7				

LANDSCAPE NOTE:		
SLOPE:	ASPECT:	GROUNDWATER:
OTHER SITE NOTES:		

Attachment 5

SITE MAP AND SYSTEM REQUIREMENTS

SKETCH NOT TO SCALE LOCATION: APPLICANT:



IDENTIFY ANY KNOWN EASMENTS, WELLS, ROADS, DWELLING AREA, SYSTEM LOCATION, SITE EVAL LOCATION, DIRECTION, AND OTHER PERTINANT INFORMATION

SYSTEMS APPROVED ARE THE MINIMUM TO MEET CURRENT POLICY/RULES AND ARE NOT DESIGN SPECIFICATIONS

USE:	SEWAGE FLOW:	# BEDROOMS:	TANK SIZE:
SYSTEM TYPE APPROVED:			
ABSORPTION FACILTIY DESIGN CRITERIA			
INITIAL:	MIN SIZE:	MAX DEPTH:	MIN DEPTH:
REPLACEMENT:	MIN SIZE:	MAX DEPTH:	MIN DEPTH:
SPECIAL CONDITIONS:			
EVALUATOR:	TITLE:	AGENCY:	PAGE 2 of

Attachment 6

FIELD EVAL SOIL FORM

NAME: LOCATION: APP #: DATE:

T: R: S: LAT: LON: ASPECT:

VEGETATION: WEATHER:

LANDFORM: PARENT MATERIAL: GROUND WATER:

PIT #						CONSISTENCE			ROOTS		ROCK/FRAGMENTS		
DEPTH	TEXTURE	COLOR (WET)	MOIST.	BOUND.	STRUCTURE	DRY	MOIST	CEMENT.	QUANTITY	SIZE	%	SIZE	OTHER INFO
			D M W	S I W B	GR ABK SBK PL WEG PR COL SGR MA CDY	L S SH MH HA VH EH R VR	L VFR FR FI VFI EF SR R VR	NC EW VW W M ST VS I	FEW COMMON MANY	VF <1mm F 1-<2mm M 2-<5mm C 5-<10mm VC > 10mm		GRAVEL 2-75mm COBBELS 75-250mm STONES 250-600mm BOULDERS >600mm	
			D M W	S I W B	GR ABK SBK PL WEG PR COL SGR MA CDY	L S SH MH HA VH EH R VR	L VFR FR FI VFI EF SR R VR	NC EW VW W M ST VS I	FEW COMMON MANY	VF <1mm F 1-<2mm M 2-<5mm C 5-<10mm VC > 10mm		GRAVEL 2-75mm COBBELS 75-250mm STONES 250-600mm BOULDERS >600mm	
			D M W	S I W B	GR ABK SBK PL WEG PR COL SGR MA CDY	L S SH MH HA VH EH R VR	L VFR FR FI VFI EF SR R VR	NC EW VW W M ST VS I	FEW COMMON MANY	VF <1mm F 1-<2mm M 2-<5mm C 5-<10mm VC > 10mm		GRAVEL 2-75mm COBBELS 75-250mm STONES 250-600mm BOULDERS >600mm	
			D M W	S I W B	GR ABK SBK PL WEG PR COL SGR MA CDY	L S SH MH HA VH EH R VR	L VFR FR FI VFI EF SR R VR	NC EW VW W M ST VS I	FEW COMMON MANY	VF <1mm F 1-<2mm M 2-<5mm C 5-<10mm VC > 10mm		GRAVEL 2-75mm COBBELS 75-250mm STONES 250-600mm BOULDERS >600mm	

PIT #						CONSISTENCE			ROOTS		ROCK/FRAGMENTS		
DEPTH	TEXTURE	COLOR (WET)	MOIST.	BOUND.	STRUCTURE	DRY	MOIST	CEMENT.	QUANTITY	SIZE	%	SIZE	OTHER INFO
			D M W	S I W B	GR ABK SBK PL WEG PR COL SGR MA CDY	L S SH MH HA VH EH R VR	L VFR FR FI VFI EF SR R VR	NC EW VW W M ST VS I	FEW COMMON MANY	VF <1mm F 1-<2mm M 2-<5mm C 5-<10mm VC > 10mm		GRAVEL 2-75mm COBBELS 75-250mm STONES 250-600mm BOULDERS >600mm	
			D M W	S I W B	GR ABK SBK PL WEG PR COL SGR MA CDY	L S SH MH HA VH EH R VR	L VFR FR FI VFI EF SR R VR	NC EW VW W M ST VS I	FEW COMMON MANY	VF <1mm F 1-<2mm M 2-<5mm C 5-<10mm VC > 10mm		GRAVEL 2-75mm COBBELS 75-250mm STONES 250-600mm BOULDERS >600mm	
			D M W	S I W B	GR ABK SBK PL WEG PR COL SGR MA CDY	L S SH MH HA VH EH R VR	L VFR FR FI VFI EF SR R VR	NC EW VW W M ST VS I	FEW COMMON MANY	VF <1mm F 1-<2mm M 2-<5mm C 5-<10mm VC > 10mm		GRAVEL 2-75mm COBBELS 75-250mm STONES 250-600mm BOULDERS >600mm	
			D M W	S I W B	GR ABK SBK PL WEG PR COL SGR MA CDY	L S SH MH HA VH EH R VR	L VFR FR FI VFI EF SR R VR	NC EW VW W M ST VS I	FEW COMMON MANY	VF <1mm F 1-<2mm M 2-<5mm C 5-<10mm VC > 10mm		GRAVEL 2-75mm COBBELS 75-250mm STONES 250-600mm BOULDERS >600mm	

Application for Onsite Waste Treatment System

Modoc County Environmental Health Department
202 West 4th Street • Alturas, CA 96101
Phone: (530) 233-6310 Fax: (530) 233-6342
www.eh.co.modoc.ca.us

For Office Use Only:	Date Stamp
Date Received _____	
Fee Paid _____	
Application Number _____	
Date of 1st Inspection _____	
Date of 2nd Inspection _____	
Date of Final Inspection _____	
Date of Completion _____	

A. Property Owner Information

_____ Name
_____ Mailing Address (Street or PO Box, City, State, Zip Code)
_____ Phone Number

B. Legal Property Description

_____ Township
_____ Range
_____ Section
_____ A.P.N.
_____ Acreage or Lot Size

_____ Subdivision Name
_____ Lot
_____ Block

Property Address: _____ Address _____ City _____ State _____ Zip Code

Directions to Property: _____

_____

C. Existing Facility/Proposed Facility/Water Information

Existing Facility:

☐ Single Family Residence

_____ Number of Bedrooms

☐ Other _____

Proposed Facility:

☐ Single Family Residence

_____ Number of Bedrooms

☐ Other _____

Water Supply:

☐ Public _____ Name

☐ Private _____ Well, Spring, Shared

D. Type of Application

☐ Site Evaluation
☐ New Construction
- ☐ Standard
- ☐ Advance Treatment
- ☐ Gray Water
- ☐ Alternative Technology
- ☐ Holding Vault

☐ Authorization Notice For:
- ☐ Replacing a Mobile Home or House with another Mobile Home or House
- ☐ The Addition of One or More Bedrooms
- ☐ Other Specify

☐ Permit Renewal
☐ Permit Repair ☐ Major ☐ Minor
☐ Alteration Permit ☐ Major ☐ Minor

☐ Water Saving Reduction Request
Include water saving questionnaire with application.

If the required fee and attachments are not included with this application, it will be returned to you as incomplete. Post a flag or sign with your name and address at the entrance to the property. Flag and number test holes site evaluation.
By my signature, I certify that the information I have furnished is correct, and hereby grant Modoc County Environmental Health and its authorized agents permission to enter onto the above described property for purpose of this application.

_____ Signature
_____ Date

_____ Applicant's Name – Please Print Legibly
_____ Applicant's Phone Number
_____ Applicant's Email Address

_____ Applicant's Mailing Address

Applicant is the: ☐ Owner ☐ Authorized Representative ☐ Licensed Contractor Contractors Name _____
☐ Authorization Attached

EXISTING SEPTIC SYSTEM DESCRIPTION

(Use for Repair, Alteration or Authorization Notice)

Please answer the following questions as completely as possible, and to the best of your knowledge.

1. Your existing septic system consists of (check all that apply):
   - ☐ Septic Tank ☐ Disposal Trenches ☐ Capping Fill ☐ Sandfilter
   - ☐ Seepage Bed ☐ Cesspool or Pit ☐ Unknown
   - ☐ Other (Describe) _____
2. When was your septic system installed? _____ _____
   (Date) (Permit Number)
3. Tank Material: ☐ Concrete ☐ Steel ☐ Plastic or Fiberglass ☐ Unknown
4. Septic Tank Volume (in gallons): _____
5. When was the septic tank last pumped? _____ Attach receipt if available.
6. Number of disposal trenches _____
7. Total length of disposal trenches (in feet) _____
8. Do you propose to use the existing septic system? ☐ Yes ☐ No
9. Is your septic system currently in use? ☐ Yes ☐ No If no, date of last use _____
10. If the septic system currently serves a dwelling:

    How many bedrooms are in the dwelling? _____ How many people occupy the dwelling? _____
11. How many bedrooms will be in the proposed dwelling? _____ How many occupants? _____
12. If the septic system serves a business:

    How many total employees are there? _____

    Type of business _____
13. Is there a proposed change of use of your structure (home or business)? ☐ Yes ☐ No

    If yes, please explain _____
14. Provide a plot plan (sketch) on the reverse side of this form showing the best estimated or actual measurements that locate the existing septic tank and disposal trenches, property lines, easements, existing structures, driveways, and water supply. Indicate the direction of north. If you are proposing to replace the septic system, indicate the test hole location.

By my signature, I certify that the above information and the plot plan on the reverse side of this form are accurate and true to the best of my knowledge.

_____ _____
(Date) Signature of Property Owner or Legally Authorized Representative

---

County Use Only: Record of existing system: ☐ Yes ☐ No ☐ Attached Date Issued _____

Permit Number _____ Other file information: _____

Modoc County Environmental Health
202 West 4th Street • Alturas, CA 96101
Phone (530) 233-6310 • Fax (530) 233-6342

NOTICE AUTHORIZING REPRESENTATIVE

I, _____, have authorized
(Property Owner/ Print Name)

_____ to act as my agent in performing
(Authorized Representative /Print Name)
the activities necessary to obtain site evaluations, permits, and other onsite wastewater treatment program services provided by Modoc County Environmental Health on the property described below in accordance with Modoc County Ordinance Chapter 13.04. I agree that any costs not satisfied by the Authorized Representative are my responsibility.

PROPERTY IDENTIFICATION:

_____
Property Situs or Road Address

Township _____ Range _____ Section _____

Township _____ Range _____ Section _____

PROPERTY OWNER:

Printed Name: _____

Signature: _____ Date: _____

Address: _____ Phone: _____

City, State, Zip: _____ Fax: _____

Email Address: _____

AUTHORIZED REPRESENTATIVE:

Printed Name: _____

Signature: _____ Date: _____

Address: _____ Phone: _____

City, State, Zip: _____ Fax: _____

Email Address: _____

Test Pit Preparation for Onsite Sewage Evaluations

When do you need a "Test Pit?"

When you apply for a permit to construct an onsite sewage disposal system, a County inspector will have to visit the proposed construction site. A test pit allows the inspector to test and examine the soil and soil layers and will help determine if it is appropriate to proceed with construction. This process is often referred to as a "site evaluation."

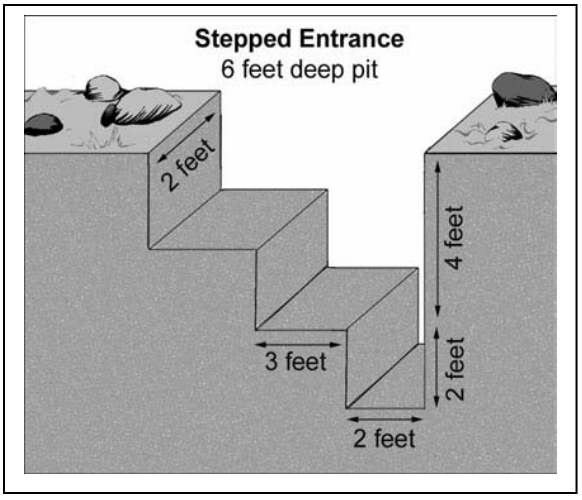
Preparing the test pit

To provide for stabilization and safe access, standard test pits for site evaluations must be prepared in the following manner:

- The bottom of the pit shall be at least 2 feet wide and 4 feet long.
- The depth shall be at least 4.5 feet and not exceed 5 feet.
- In some instances, pits need only be excavated to the layer of hard rock or to the water table if that layer is less than 5 feet.

6-Foot test pits

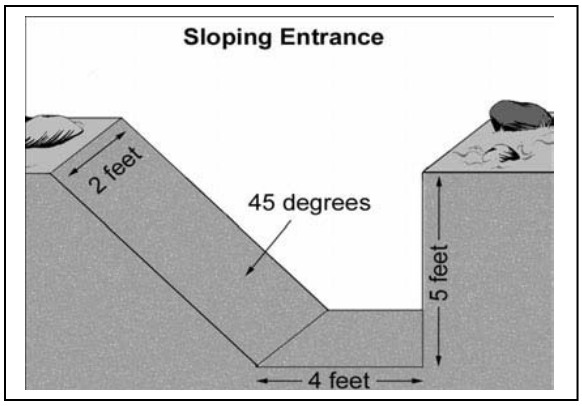
At the request of the inspector, test pits may need to be excavated to a depth of 6 feet as shown in the figure below:



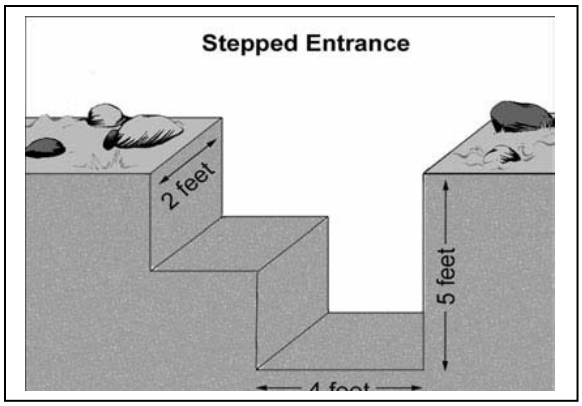
The entrance to a 6-foot test pit may be sloped or stepped as soil conditions warrant.

Providing Access to the Standard Test Pits

For easy access, one end of the test pit shall be either:



Sloped *at approximately 45 degrees or less if the soils are dry or loose.*



Stepped *when soils are wet.*

All soils need to be a minimum of 2 feet from the pit edge.
Request for deeper pits may be required for groundwater determination.

For more information:
Visit Modoc County Environmental Health's website at: http://www.eh.co.modoc.ca.us.com

MODOC COUNTY LAND USE COMPATIBILITY STATEMENT (LUCS)

Modoc County Environmental Health (MCEH)
202 West 4th Street • Alturas, CA 96101

WHAT IS A LUCS? The Land Use Compatibility Statement is the process used by MCEH to determine whether MCEH permits and other approvals affecting land use are consistent with local government comprehensive plans. The LUCS form is included in the application approval packet.

WHY IS A LUCS REQUIRED? Modoc County requires activities that impact land use be consistent with local comprehensive plans and land use regulations.

WHEN IS A LUCS REQUIRED? A LUCS is required for nearly all MCEH permits, registrations under general permits, and certain other approvals and certifications that affect land use.

HOW TO COMPLETE A LUCS:

Step	Who Does It	What Happens
1	Applicant	Completes Section 1 of the LUCS and submits it to the appropriate city or county planning office.
2	City or County Planning Office	Completes Section 2 of the LUCS by determining if the activity or use meets all local planning requirements, and returns to the applicant the signed and dated LUCS form **with findings of fact for any local reviews or necessary planning approvals.**
3	Applicant	Includes the completed LUCS with **findings of facts** with the submittal application to MCEH.

A permit cannot be issued if the proposed facility does not comply with all applicable local land use requirements. The applicant is responsible for working with the local planning office to comply with land use requirements.

WHERE TO GET HELP: Questions about the LUCS process can be directed to Modoc County Planning Department.
203 West 4th Street • Alturas, CA 96101 • (530) 233-6406

SECTION 1 – TO BE COMPLETED BY APPLICANT (may be filled in electronically by tabbing to each field)

1. Applicant Name/Property Owner: _____

Mailing Address: _____

City, State, Zip: _____

Telephone: _____

2. Property Information:

County: _____ **APN:** _____

Township: _____ **Range:** _____ **Section:** _____

Physical Address: _____

Block: _____ **Lot:** _____

Subdivision Name (if applicable): _____

3. The Proposed use is for: _____

Describe: _____

_____

_____

_____

4. Permit or Approval being requested:

- ☐ **Construction-Installation permit for:** ☐ New Construction ☐ Repair ☐ Alteration
- ☐ **Non-water-carried facility requests** (for example, pit privy/vault toilet for campgrounds).
- ☐ **Authorization Notice for:** ☐ Replacement of dwelling ☐ Bedroom Addition
- ☐ **Other changes in land use involving potential sewage flow increases**
- ☐ **Food Program:** ☐ Permanent Food Facility ☐ Temporary Food Facility
  ☐ Mobile Food Facility ☐ Cottage Food
- ☐ **Tattoo Facility** ☐ **Organized Camp** ☐ **Public Pool/Spa** ☐ **Medical Waste Permit**
  CUPA: ☐ Aboveground Storage Tanks ☐ Underground Storage Tanks
  ☐ Hazardous Waste Generator ☐ Hazardous Materials Business Plan
  ☐ Hazardous Materials Business Plan Onsite Treatment
- ☐ **Well:** ☐ Public ☐ Domestic ☐ Other Use: Describe _____
- ☐ **Solid Waste Facility**

SECTION 2 – TO BE COMPLETED BY CITY OR COUNTY PLANNING OFFICIAL

5. Property Zoning: _____ **Zoning Minimum Parcel Size:** _____

6. The facility is located: ☐ Inside city limits of Alturas ☐ Unincorporated area of the County
The Proposed facility is subject to: ☐City Jurisdiction ☐ County Jurisdiction
☐ Shared City/County jurisdiction

7. Does the proposed facility comply with all applicable local land use requirements: ☐ Yes ☐ No
If you answered "Yes" above, was this compliance based on:

- ☐Outright compliance with local comprehensive plans and land use requirements.
- ☐Conditional approval (provide findings and citation or attach a copy of the applicable land use decision)

Either provide reasons for affirmative compliance decision or attach findings of fact: _____

_____

_____

8. Planning Official Signature: _____

Print Name: _____ **Title:** _____

Telephone: _____ **Date:** _____

Water Saving Leach Area Reduction Request

Modoc County Environmental Health

202 West 4th Street • Alturas, CA 96101

Name: _____ APN: _____

Township: _____ Range: _____ Section: _____

Project: ☐ New Construction ☐ Major Repair

System Designed Use: _____ Year Building Constructed: _____

Dwelling: Number of Bedrooms _____ Number of Bathrooms _____

Bathroom #1: Toilet GAL/Flush _____ Shower Flow GPM _____ Sink Flow_____ Tub Size: ☐ < 50 Gal ☐ 50-100 Gal ☐ > 100 Gal

Bathroom #2: Toilet GAL/Flush _____ Shower Flow GPM _____ Sink Flow_____ Tub Size: ☐ < 50 Gal ☐ 50-100 Gal ☐ > 100 Gal

Bathroom #3: Toilet GAL/Flush _____ Shower Flow GPM _____ Sink Flow_____ Tub Size: ☐ < 50 Gal ☐ 50-100 Gal ☐ > 100 Gal

Kitchen Faucet GPM: _____ Dishwasher: ☐ Yes ☐ No Energy Star: ☐ ☐ Yes No GAL/Load: _____

Utility Sink GPM: _____ Clothes Wash- ☐ er: ☐ Yes No Energy ☐ ☐ Star: Yes No GAL/Load: _____ ☐ ☐

Other Indoor Water Fixtures: Yes No GPM: _____ GAL/Use: _____

I understand that this application for a water saving energy reduction relates to the proper function of my leach line and the continued use of water saving appliances and fixtures is a condition of use for this Onsite Waste Treatment System design reduction and is a condition of use on my permit.

_____

Printed Name Signature

_____

Modoc County Environmental Health Review

Does Owner meet current building code requirements for energy/water efficient fixtures?: ☐ Yes ☐ No

Does Owner utilize water saving appliances?: ☐ Yes ☐ No

Are there any appliances or devices (large tubs) that could reduce the life of the Onsite Waste Treatment System due to the use of a reduce flow calculation?: ☐ Yes ☐ No Explain, If Yes: _____

Does the site soil conditions favor a reduction?: ☐ Yes ☐ No Explain, If Yes: _____

Project:

Design flow as per Table 2: _____

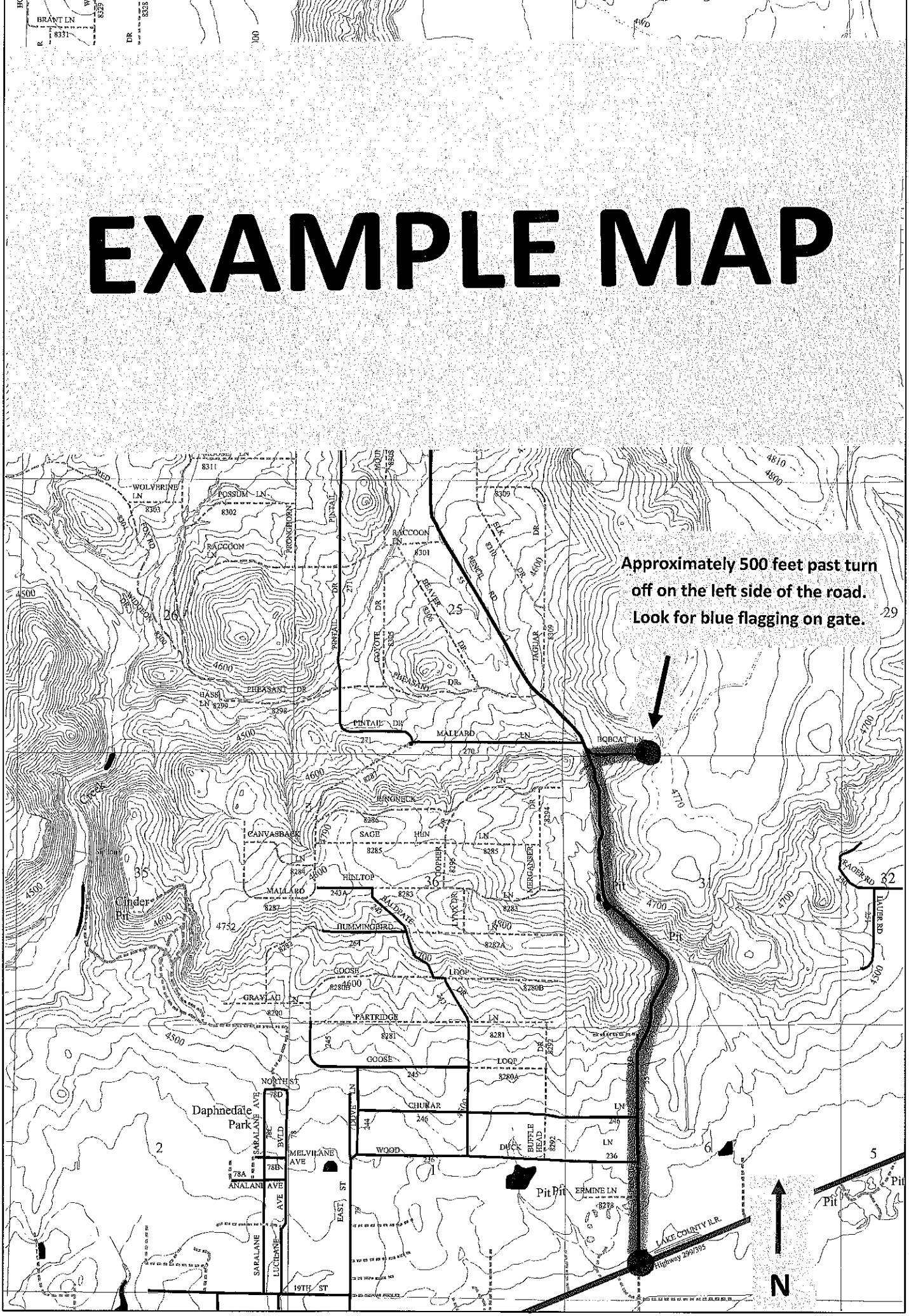
Leach area required: _____

Design flow with reduction: _____

Leach area required: _____

Leach Area Savings: _____

EXAMPLE MAP


Approximately 500 feet past turn off on the left side of the road. Look for blue flagging on gate.
BOBCAT LN
MALLARD LN
PINTAIL DR
RACCOON LN
WOLVERINE LN
POSSUM LN
BASS LN
PHEASANT DR
RINGNECK
CANVASBACK
SAGE HEN LN
HILLTOP
HUMMINGBIRD
GOOSE LOOP
PARTRIDGE LN
CHUKAR
WOOD DUCK
BUFFLE HEAD
ERMINE LN
GRAVLAU LN
NORTH ST
Daphnedale Park
MELVILANE AVE
ANALANI AVE
SARALANE AVE
LUCIANE AVE
19TH ST
EAST ST
Cinder Pit
Pit
LAKE COUNTY R.R.
Highway 29/395
TO LAKEVIEW
TO ALTURAS
N

MODOC OWTS PROGRAM

WHO CAN DO WHAT

- SITE EVALUATION
    - Ca. Registered Environmental Health Specialist
    - Ca. Registered Geologist
    - Certified Soil Scientist- Needs to be approved by County authority.
    - Ca. Registered Civil Engineer
- OWTS INSTALLATION
    - Ca. Contractor License A, C36, and C42.
    - Owner
- MAINTENEANCE CONTRACT FOR NON-STANDARD SYSTEMS
    - ADVANCED TREATEMENT
        - Manufacture Certification
    - SANDFILTER/PRESSURE DISTRIBUTION
        - NAWT Certification
        - REHS
        - Ca. Licensed Contractor C36 or C42
    - ALTERNATIVE TECHNOLOGIES AND GRAY WATER
        - Depends on System
    - HOLDING TANK
        - Registered Pumper Truck Required for contract
            - Ca. Licensed Contractor C36 or C32
            - NAWT Certification
            - REHS
- EXISTING SYSTEM EVALUATION
    - Ca. Licensed Contractor C36 or C32
    - NAWT Certification
    - REHS
    - Manufacture Certified Inspector
- OWTS DESIGN
    - Ca. Registered Environmental Health Specialist
    - Ca. Registered Geologist
    - Certified Soil Scientist- Needs to be approved by Environmental Health.
    - Ca. Registered Civil Engineer
    - Ca. Contractor License A, C36, and C42.
    - Owner
- OWTS INSPECTION
    - Ca. Registered Environmental Health Specialist

LOCAL ONSITE WASTEWATER PROJECT PROCESS STEPS

NEW SYSTEM | REPAIR | ALTERATION | AUTHORIZATION | PERMIT RENEWAL/TRANSFER

SUBMIT APPLICATION AND FEE FOR SITE EVALUATION AND SCHEDULE SITE VISIT. (COMMERCIAL OR DOMESTIC)

COUNTY DETERMINES IF SITE IS:
>SUITABLE FOR OWTS
>TYPE OF SYSTEM REQUIRED
EVALUATION SCANNED & FILED.

NOT SUITABLE

DISCUSS POSSIBLE OPTIONS WITH APPLICANT.

IF NEW SITE IS CHOOSEN, START APPLICATION PROCESS OVER.

YES

TYPE OF SYSTEM REQUIRED AS PER APPLIED USE AND SITE CONDITIONS DETERMINED FROM EVALUATION:

STANDARD

SUBMIT NEW CONSTRUCTION APPLICATION, SYSTEM DESIGN PLAN, FEE, AND SCHEDULE SITE VISIT (COMMERCIAL OR DOMESTIC).

TYPE OF SYSTEM REQUIRED AS PER APPLIED USE AND SITE CONDITIONS DETERMINED FROM EVALUATION:

ADVANCED TREATMENT

SUBMIT NEW CONSTRUCTION APPLICATION, SYSTEM DESIGN PLAN, MAINTENANCE CONTRACT, FEE, AND SCHEDULE SITE VISIT (COMMERCIAL OR DOMESTIC).

TYPE OF SYSTEM REQUIRED AS PER APPLIED USE AND SITE CONDITIONS DETERMINED FROM EVALUATION:

ALTERNATIVE TECHNOLOGIES AND GRAYWATER

SUBMIT NEW CONSTRUCTION APPLICATION, SYSTEM DESIGN PLAN, FEE, AND SCHEDULE SITE VISIT (DOMESTIC WASTE ONLY).

TYPE OF SYSTEM REQUIRED AS PER APPLIED USE AND SITE CONDITIONS DETERMINED FROM EVALUATION:

HOLDING TANK

SUBMIT NEW CONSTRUCTION APPLICATION, SYSTEM DESIGN PLAN, MAINTENANCE CONTRACT, FEE, AND SCHEDULE SITE VISIT (DOMESTIC WASTE ONLY).

COUNTY APPROVES APPLICATION AND ISSUES PERMIT.

COUNTY INSPECTS AND APPROVES INSTALLATION. FINALED PERMIT SCANNED ON FILE.

LOCAL ONSITE WASTEWATER PROJECT PROCESS STEPS

NEW SYSTEM | REPAIR | ALTERATION | AUTHORIZATION | PERMIT RENEWAL/TRANSFER

SUBMIT APPLICATION, SYSTEM DESIGN PLAN AND FEE FOR OWTS REPAIR AND SCHEDULE SITE VISIT. (COMMERCIAL OR DOMESTIC)

MINOR REPAIR: TANK AND/OR PUMP.

COUNTY APPROVES APPLICATION AND ISSUES PERMIT.

OWNER/ CONTRACTOR INSTALL SYSTEM.

COUNTY INSPECTS AND APPROVES INSTALATION. FINALED PERMIT SCANNED ON FILE.

MAJOR REPAIR: DRAIN FIELD/ADVANCED TREATMENT UNIT, CAN INCLUDE PUMP/TANK.

EXISITING EVAL ON FILE?

NO

COUNTY DETERMINES REQUIREMENTS BY A SITE VISIT. (SOIL PROFILE HOLES AND/OR PERCOLATION TEST MAY BE REQUIRED)
>LOCATION
>TYPE OF SYSTEM REQUIRED

YES

TYPE OF SYSTEM REQUIRED AS PER APPLIED USE AND SITE CONDITIONS DETERMINED FROM EVALUATION:

STANDARD

TYPE OF SYSTEM REQUIRED AS PER APPLIED USE AND SITE CONDITIONS DETERMINED FROM EVALUATION:

ADVANCED TREATMENT

TYPE OF SYSTEM REQUIRED AS PER APPLIED USE AND SITE CONDITIONS DETERMINED FROM EVALUATION:

ALTERNATIVE TECHNOLOGIES AND GRAYWATER

TYPE OF SYSTEM REQUIRED AS PER APPLIED USE AND SITE CONDITIONS DETERMINED FROM EVALUATION:

HOLDING TANK

COUNTY APPROVES APPLICATION AND ISSUES PERMIT.

OWNER/CONTRACTOR INSTALL SYSTEM.

COUNTY INSPECTS AND APPROVES INSTALLATION. FINALED PERMIT SCANNED ON FILE.

LOCAL ONSITE WASTEWATER PROJECT PROCESS STEPS

NEW SYSTEM | REPAIR | ALTERATION | AUTHORIZATION | PERMIT RENEWAL/TRANSFER

SUBMIT APPLICATION, SYSTEM DESIGN PLAN AND FEE FOR OWTS ALTERATION. SCHEDULE SITE VISIT. (COMMERCIAL OR DOMESTIC)

EXISITING EVAL ON FILE?

YES

COUNTY DETERMINES REQUIREMENTS BY A SITE VISIT AND USE OF EXISTING EVAL IF INFORMATION IS PERTINENT.
>LOCATION
>TYPE OF SYSTEM REQUIRED

NO

COUNTY DETERMINES REQUIREMENTS BY A SITE VISIT. (SOIL PROFILE HOLES AND/OR PERCOLATION TEST WILL BE REQUIRED)
>LOCATION
>TYPE OF SYSTEM REQUIRED

TYPE OF SYSTEM REQUIRED AS PER APPLIED USE AND SITE CONDITIONS DETERMINED FROM EVALUATION:

STANDARD

TYPE OF SYSTEM REQUIRED AS PER APPLIED USE AND SITE CONDITIONS DETERMINED FROM EVALUATION:

ADVANCED TREATMENT

TYPE OF SYSTEM REQUIRED AS PER APPLIED USE AND SITE CONDITIONS DETERMINED FROM EVALUATION:

ALTERNATIVE TECHNOLOGIES AND GRAYWATER

TYPE OF SYSTEM REQUIRED AS PER APPLIED USE AND SITE CONDITIONS DETERMINED FROM EVALUATION:

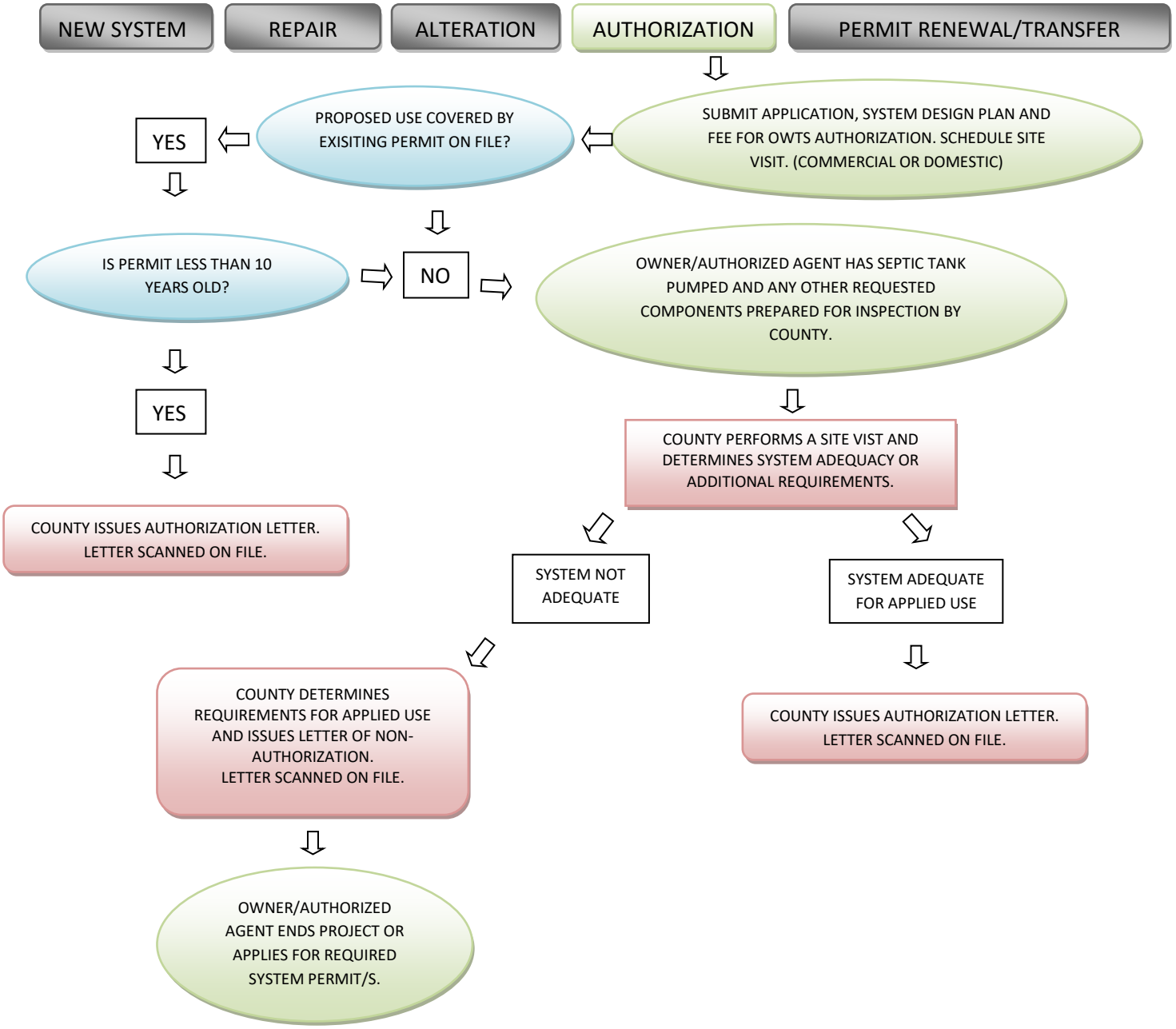
HOLDING TANK

COUNTY APPROVES APPLICATION, PLANS, AND ISSUES PERMIT.

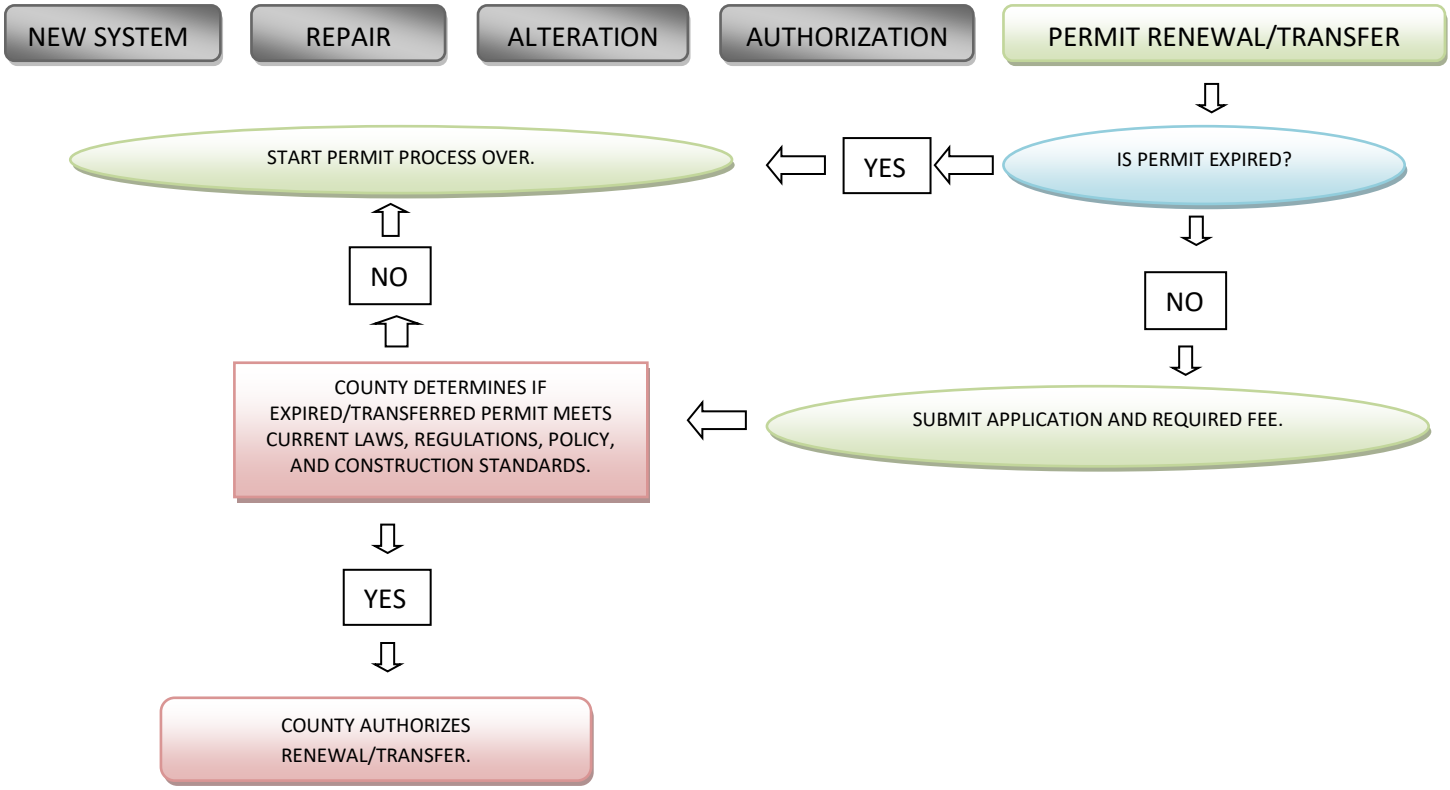
OWNER/CONTRACTOR INSTALL SYSTEM.

COUNTY INSPECTS AND APPROVES INSTALLATION. FINALED PERMIT SCANNED ON FILE.

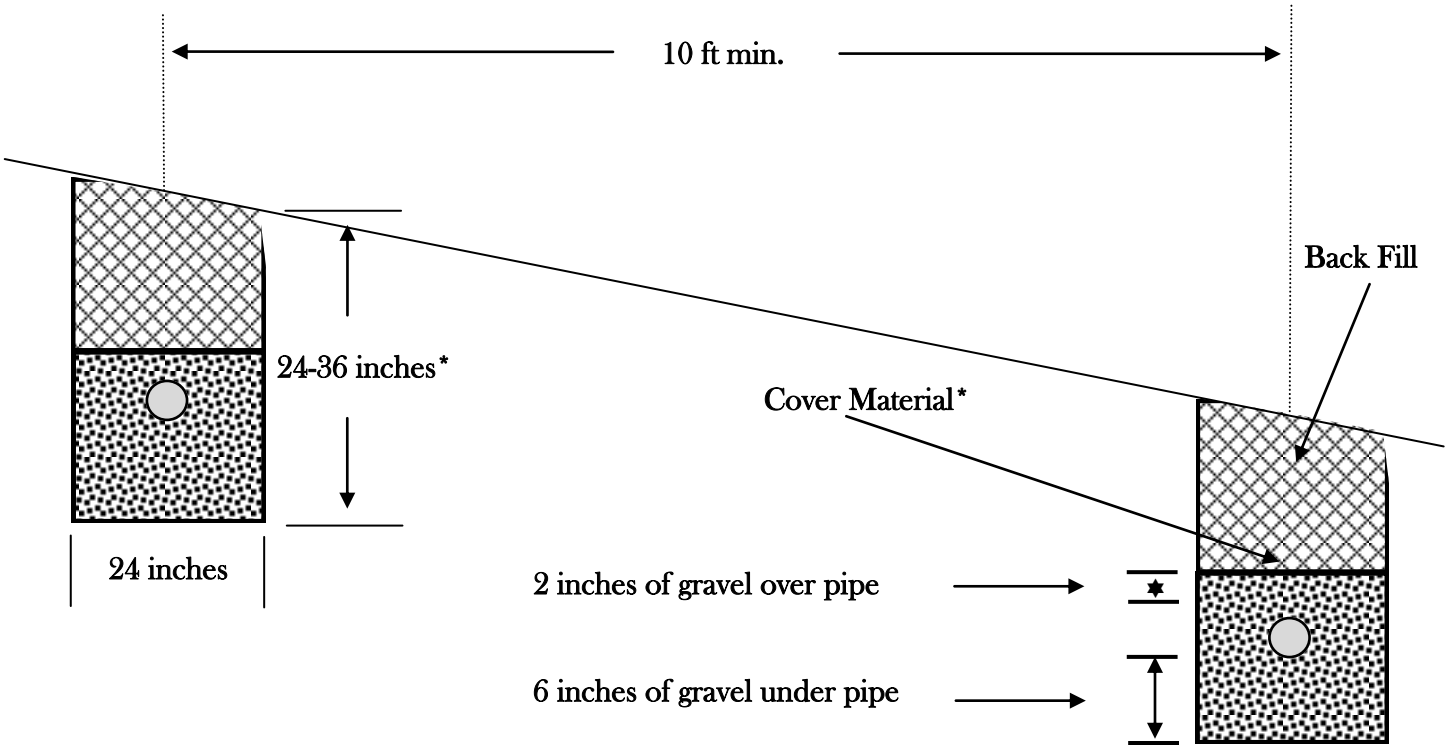
LOCAL ONSITE WASTEWATER PROJECT PROCESS STEPS



LOCAL ONSITE WASTEWATER PROJECT PROCESS STEPS

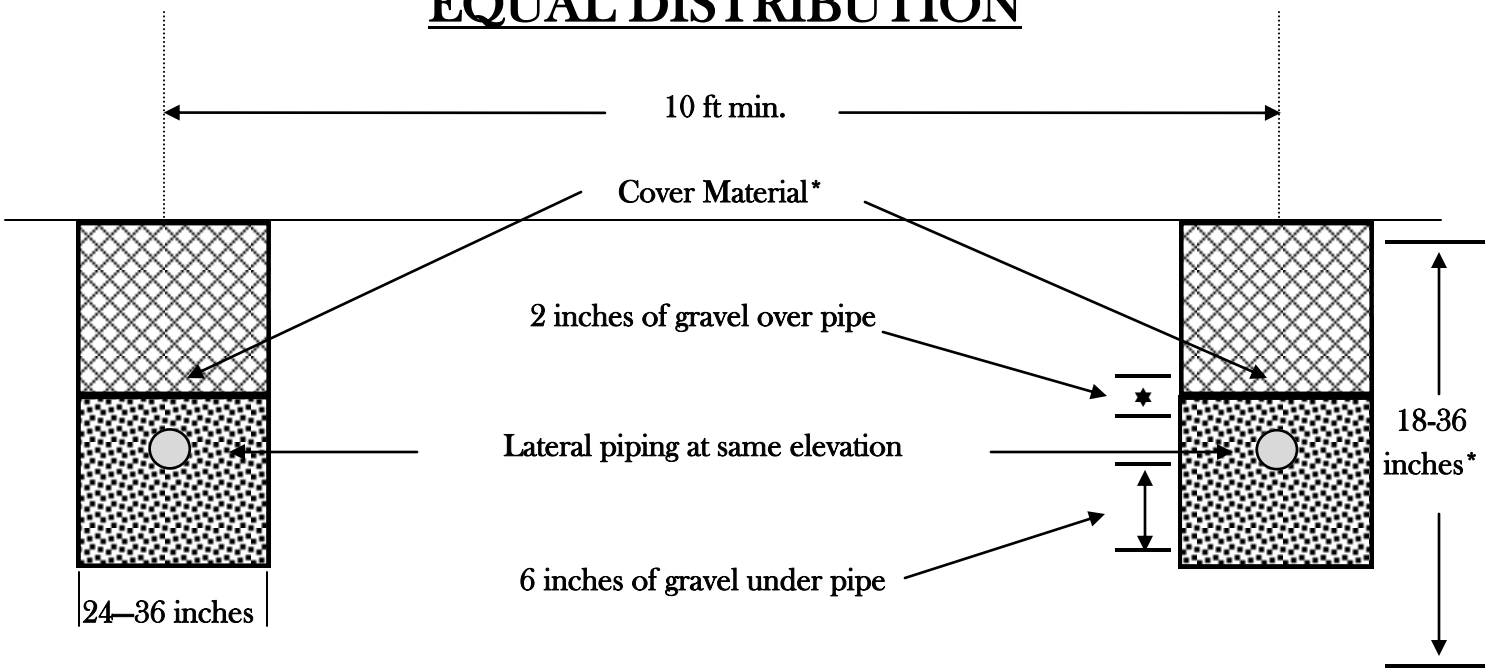


SERIAL DISTRIBUTION



* See permit conditions for trench depth and cover material specifications

EQUAL DISTRIBUTION



*See permit conditions for trench depth and cover material specifications

Example

Capping Fill Drainfield

Capping Fill systems (cap/fill) are standard systems with the trenches installed shallower than a standard trench would be allowed. Soil must be brought in to be mixed and then added over the drainfield to allow for adequate cover. These shallow drainfields are used to maintain setbacks between the bottom of the drainfield trench and either:

An impermeable layer,
A rapidly draining layer (sand or gravel) or
A water table.

The Capping fill concept sounds easy but they can be tricky to install. The trench depths (maximum and minimum) allow for little variation in elevation difference: the trenches have to follow the exact contour of the slope. Scarifying, and then adding the cap without compacting the soil can be difficult also.
The cap/fill drainfield uses a septic tank to settle out the solids and pass only liquid black water to the absorption drainfield. The liquid passes out of the septic tank and is delivered to the drainfield through the effluent sewer. This pipe must have a minimum of 8 inches of fall between the tank and the distribution box. From the distribution box, the black water flows into the perforated pipe of the cap/fill drainfield. Elevations are very critical when designing your capping fill installation. The top of the tank outlet must be a minimum of 18 inches above the maximum trench depth as designated on your permit or site evaluation report.
The area of the drainfield installation is first scarified to remove all vegetation. The drainfield trenches are dug very shallow (12-22 inches depending on permit) in the native soil. The gravel and perforated pipe (perf. pipe) are installed and covered with filter fabric. After the pre-cover inspection, the drainfield is covered with capping material. The capping material is either taken from somewhere else on the lot, or brought in after being inspected. The cap must be installed over the entire drainfield area to a depth of 14 to 16 inches over the gravel layer, and feathered out 10 feet beyond the drainfield trenches.

Rules for Construction and Inspection

DO NOT install a capping fill (cap/fill) drainfield when the approved area is wet or frozen!!! Construction of cap/fill drainfields shall occur between June 1st and October 1st unless authorized by the agent/sanitarian. The upper 18 inches of the natural soil must not be moist enough to cause loss of soil structure and/or porosity when worked. (Soil is too moist when a handful is squeezed several times and the sample looks wet or shiny on the surface. Call sanitarian for verification.)
The drainfield area (including the 10 foot cap perimeter) and the borrow site (if applicable) shall be scarified. This is the removal of all the vegetation and one to two inches of the soil in the drainfield area. This will eliminate any waxy layer (pine needles, sage wood ...) and assure a good contact layer between the native soil and the cap material. The top six (6) inches of the native soil shall be tilled or worked so as to easily mix with the cap material. Remove as little soil as possible but achieve thorough removal of all vegetation.

Application for License
Sewage Disposal
Business Registration

Modoc County Environmental Health
202 West 4th Street • Alturas, CA 96101

Official Use Only

Date Paid: _____
Amt: _____
CK#: _____
Date Issued: _____
Registration #: _____

I hereby apply for a Sewage Disposal Service Registration. The registration period is valid for three years and is based on the calendar year. Septage management plans are required to submitted with this application and at the end of each calendar year to meet state reporting requirements.

Please Note! Your license may be valid for a shorter period of time if you register after January 1st. Registrations issued three years up to December 31st of the third year unless suspended or revoked.

☐ New Registration ☐ Reinstatement of Suspended or Revoked ☐ Transfer of Business Owner

☐ Amendment of Current Registration

Please Include the Following:

1.) Septage Management Plan Work Sheet

2.) Completed self inspection form of pumping equipment used to haul, pump or store septage.

Exact business name (this name must match your application and bond)	Contractor No.
Owner Name	Phone No.

Mailing Address	Physical Address (if different)
City, State, Zip	City, State, Zip

Your Name	Title (list additional member/officers on back of form)
Address	City, State, Zip

Email Address (print legibly)

By my signature below, I certify that all the information provided with this application is true and accurate to the best of my knowledge. I understand that this registration is valid for three years, however I am required to submit a septage management plan annually at the end of each calendar year.

_____ _____ _____

Signature of Owner or Member (No Stamps) **Title** **Date**

Please be sure you have completed this application and enclosed all required attachments before submitting it to Modoc County Environmental Health at the address found in the upper center of this form. The non-refundable/non-poratable application fee must accompany this application.

SEPTAGE MANAGEMENT PLAN WORKSHEET

GENERAL INFORMATION

1. _____ (Exact Business or Corporate Name) 2. _____ (Contractor's License #) 3. _____ (Business Phone Number)

4. _____ (Business Mailing Address)

5. _____ (Business Physical Address)

6. Authorized Business Representative: _____ (First Name) _____ (Middle Initial) _____ (Last Name) _____ (Title)

7. Sources and Approximate Volume (Gal/Yr) Pumped Annually:

A. Septic Tanks: _____ Gal/Yr B. Holding Tanks: _____ Gal/Yr C. Chemical Toilets: _____ Gal/Yr

D. Vault Toilets: _____ Gal/Yr E. Other Sources (Specify): _____ Gal/Yr

8 Septage Disposal:

A. **SEWAGE TREATMENT PLANT WHERE MOST SEPTAGE DISPOSAL OCCURS:**

- Sewage Treatment Plant: _____ (Treatment Plant Name) _____ (Location) _____ (Telephone)

a. Septage Sources and Volumes (Gal/Yr) Accepted by Treatment Plant:

i. Septic Tanks: _____ Gal/Yr ii. Holding Tanks: _____ Gal/Yr iii. Chemical Toilets: _____ Gal/Yr

iv. Vault Toilets: _____ Gal/Yr v. Other Sources (Specify): _____ Gal/Yr

b. Location at Plant where Septage Received: _____

c. ***Provide a copy of a letter from the treatment plant operator which authorizes your business to dispose septage at the treatment plant. The letter must indicate the type of septage the plant has agreed to receive from your business.***

B. **OTHER SEWAGE TREATMENT PLANTS WHERE SEPTAGE DISPOSAL OCCURS**:

- Sewage Treatment Plant: _____ (Treatment Plant Name) _____ (Location) _____ (Telephone)

a. Septage Sources and Volumes (Gal/Yr) Accepted by Treatment Plant:

i. Septic Tanks: _____ Gal/Yr ii. Holding Tanks: _____ Gal/Yr iii. Chemical Toilets: _____ Gal/Yr

iv. Vault Toilets: _____ Gal/Yr v. Other Sources (Specify): _____ Gal/Yr

b. Location at Plant where Septage Received: _____

c. ***Provide a copy of a letter from the treatment plant operator which authorizes your business to dispose septage at the treatment plant. The letter must indicate the type of septage the plant has agreed to receive from your business.***

C. **PERMITTED SOLID WASTE DISPOSAL FACILITY:**

a. Disposal Facility Name: _____

c. Facility Type and Location: _____

d. Septage Sources and Volumes (Gal/Yr) Accepted by Disposal Facility:

i. Septic Tanks: _____ Gal/Yr ii. Holding Tanks: _____ Gal/Yr iii. Chemical Toilets: _____ Gal/Yr

iv. Vault Toilets: _____ Gal/Yr v. Other Sources (Specify): _____ Gal/Yr

e. Location at Disposal Facility where Septage Received: _____

f. ***Provide a copy of a letter from the treatment plant operator which authorizes your business to dispose septage at the facility plant. The letter must indicate the type of septage the plant has agreed to receive from your business***

– OVER–

9. Pumper Vehicle Description(s):

A. How many septage pumping vehicles (includes pumper trucks and tank trailers) does your business operate? _____

B. ***Provide a copy of the most recent to Department of Environmental Health "Sewage Pumping Equipment Description/ Vehicle Inspection" form completed for each pumper truck you operate. Be sure the form has been signed by a representative from the Department of Environmental Health.***

---

10. Provide a description of any interim storage/transfer facilities used for holding septage pending disposal or application elsewhere:

A. Type Storage Facility: _____ B. Volume Facility: ` _____

C. Sources(s) Septage Stored:

a. Septic Tanks: ☐ Yes ☐ No b. Holding Tanks: ☐ Yes ☐ No c. Chemical Toilets: ☐ Yes ☐ No

d. Vault Toilets: ☐ Yes ☐ No e. Other: ☐ Yes ☐ No _____
Specify

Existing System Evaluation Report for Onsite Wastewater Systems

Modoc County Environmental Health

202 West 4th Street, Alturas, CA 96101

Please answer the following questions as completely as possible. If you are unable to fill out any part of this form indicate in writing why these sections were left blank.

Septic System Owner - Provider Information:

Property Owner(s)(Sellers): _____ Telephone: _____

Site Address: _____ City: _____ Zip Code: _____

County: _____ Lot Size: _____ Acres/Square Feet (circle units)

Legal Description: _____

Age of wastewater treatment system _____(years) Is there a service contract for system components? _____

Date the septic tank was last pumped _____ (please attach receipt if available)

Number of people occupying dwelling _____ If un occupied, for how long has it been vacant?

The above information is true and to the best of my knowledge.

_____

Date (MM/DD/YYYY) Signature of Owner, or agent if present

Name of person performing evaluation (please print): _____

Certification:

- ☐ Installer
- ☐ Maintenance Provider
- ☐ National Association of Wastewater Technicians
- ☐ Other: MCEH approved in writing (please describe)
- ☐ Professional Engineer
- ☐ Environmental Health Specialist
- ☐ Wastewater Specialist

_____

Certification Number/Contractor License #: _____

Business Name _____ Email _____

Business address _____ Phone _____

Date of Evaluation: _____ (MM/DD/YYYY)

I hereby certify, by my signature, that I meet all of the qualifications required to perform onsite wastewater system evaluations in the state of California.

_____

Date (MM/DD/YYYY) Signature of Qualified Septic System Evaluator

1. **General System Information**

The Existing System Evaluation Report form contains 8 pages. Some of the questions on this form may not pertain to the system being evaluated, as there are many system designs. If you (the septic system evaluator) are unable to answer any of the questions on this form please indicate, in writing, why this information was not available at the time the evaluation was completed

- The existing septic system consists of (check all that apply):

☐	Septic Tank	☐	Cesspool
☐	Disposal Trenches/Leach Lines	☐	Capping Fill
☐	Seepage Bed	☐	Sand Filter
☐	Other (please describe) _____		

Note: If the system is a seepage pit or cesspool contact your local County office for further guidance.

- There is a permit for the septic system: ☐ Yes ☐ No ☐ Unknown
- Permit Number: _____
- Date septic system installed: _____ (YYYY) No record of installation date
- All plumbing fixtures are connected to the septic system ☐ Yes ☐ No ☐ Unknown

  If you answered "No" or "Unknown." please describe below:

  _____

  _____

  _____

- Additional Comments:

  _____

  _____

  _____

  _____

  _____

2. **Overall Septic System Status**

- Discharge of sewage to the ground surface: ☐ Yes ☐ No ☐ None Observed
- Discharge of sewage to surface waters: ☐ Yes ☐ No ☐ None Observed
- Sewage backup into plumbing fixtures: ☐ Yes ☐ No ☐ Unknown
- Additional Comments:

  _____

  _____

  _____

  _____

  _____

3. **Septic Tank**

In order to fully describe the conditions of the tank, the septic tank may need to be pumped. Please indicate below if the septic system tank was pumped during the course of *this* evaluation.

- Septic tank was pumped during the course of *this* evaluation: ☐ Yes ☐ No
- If the septic tank was **NOT pumped** during the course of *this* evaluation, please explain below, e.g. septic system owner declined to have the tank pumped etc:

  _____

  _____

- The septic tank material is:

  ☐ Concrete

  ☐ Steel

  ☐ Plastic

  ☐ Fiberglass

  ☐ Other (explain) _____

  ☐ Unknown

- Is the septic tank accessible? ☐ Yes ☐ No
- Septic tank volume (in gallons): _____
- Septic tank risers are at ground level: ☐ Yes ☐ No
- Tank appears to be watertight and in good condition: ☐ Yes ☐ No

  If you answered "No," please describe the condition of the septic tank below. For example, evidence of gas corrosion, cracks, leaks, etc.

  _____

  _____

  _____

- Septic tank lid(s) is intact: ☐ Yes ☐ No
- Septic tank baffles are intact: ☐ Yes ☐ No
- Effluent filter is present: ☐ Yes ☐ No
- Effluent filter is free of debris: ☐ Yes ☐ No
- Liquid level in tank relative to invert of outlet: ☐ At ☐ Above ☐ Below
- **Scum** layer _____(inches) **Sludge** layer _____(inches)
- **Scum** and **Sludge** layer more than 35% of the *total* tank volume: ☐ Yes ☐ No
- Additional Comments:

  _____

  _____

  _____

  _____

4. **Dosing Tank / Pump Basin**

Dosing tanks, where present , have a pump that send effluent to the soil absorption field (leach field). Not all septic system designs have a dosing tank.

- The septic system has a dosing tank: ☐ Yes ☐ No

(If "No," skip the rest of section 4)

- Dosing tank capacity _____(gallons)
- Dosing tank material _____
- Dosing tank appears to be watertight and in good condition: ☐ Yes ☐ No
- Dosing tank lid is intact: ☐ Yes ☐ No
- Electrical components are sealed and watertight: ☐ Yes ☐ No
- Pump/Siphon is functional: ☐ Yes ☐ No
- Type of Pump: ☐ Demand ☐ Dose ☐ Time Dose
- Pump control mechanism is functional (floats, pressure transducer) ☐ Yes ☐ No
- There is a high water alarm: ☐ Yes ☐ No
- The high water alarm (audible and visual) is working: ☐ Yes ☐ No ☐ Not Applicable
- Type of Screen: _____
- Screen is clean and free of debris: ☐ Yes ☐ No - Screen cleaned for this ☐ ☐ evaluation: Yes No
- Scum/Sludge present in Dosing Tank: ☐ Yes ☐ No
- Scum layer _____(inches) Sludge layer _____(inches)
- Additional Comments:

_____

_____

_____

5. **Soil absorption system**

The soil absorption system is a set of trenches that receives effluent from the septic tank and treats the effluent .

- The septic system has a soil absorption system: ☐ Yes ☐ No
- Was the soil absorption system part of the evaluation? ☐ Yes ☐ No

If the soil absorption system was not evaluated, please explain below (for example unable to locate, client did not authorize this part of the evaluation):

_____

_____

- Absorption Distribution: ☐ Equal ☐ Serial ☐ Pressure ☐ Equal via Pressure
- Absorption lines construction material:

☐ Gravel and Pipe ☐ Chamber ☐ Tile ☐ Polystyrene Foam and Pipe ☐ Other

- Absorption Distribution unit(s) drop box, hydrosplitter, equal distribution box): ☐ Intact ☐ Damaged ☐ N/A

- Absorption Distribution unit(s) are free of debris or solids: ☐ Yes ☐ No
- Locate all drain lines in soil absorption system: ☐ Yes ☐ No
- Lengths determined by: ☐ Physically uncovering portions of system/probing ☐ Written records
- Absorption area appears to be free from roads, vehicular traffic, structures, livestock, deep-rooted plants, etc.

  ☐ Yes ☐ No

  If you answered "No," please describe below:

  _____

  _____

  _____

  _____
- Absorption area appears to be free from surface water runoff and down spouts: ☐ Yes ☐ No
- Evidence of ponding in absorption area or distribution unit(s): ☐ Yes ☐ No
- The absorption replacement area assigned in the "as-built" drawing appears to be intact: ☐ Yes ☐ No

  If you answered "No," please explain below:

  _____

  _____

  _____
- Additional Comments:

  _____

  _____

  _____

  _____

  _____

6. **Sand Filter System**

   There are different sand filter system designs used in California. Not every sand filter system will contain all of the components mentioned below, e.g. pumps. The owner of a sand filter system **installed on or after 2016** *must* maintain an annual service contract with a certified Maintenance Provider. Maintenance records should be available from the system owner or the **maintenance records to this evaluation form.**

- The septic system has a sand filter: ☐ Yes ☐ No

  (If "No," skip the rest of section 6)
- Type of sand filter:

  ☐ Intermittent

  ☐ Re-circulating

  ☐ Bottomless
- Sand filter container appears to be watertight and in good condition: ☐ Yes ☐ No

- Sand filter appears to be free from roads, vehicular traffic, structures, livestock, deep-rooted plants, etc.

  ☐ Yes ☐ No

  If you answered "No," please describe below:

  _____

  _____

  _____

  _____

- Sand filter appears to be free from surface water runoff and down spouts: ☐ Yes ☐ No
- Evidence of ponding in/on sand filter media surface: ☐ Yes ☐ No
- Lateral lines flushed and equal distribution verified: ☐ Yes ☐ No
- Monitoring ports are present: ☐ Yes ☐ No
- Surface access to manifold and valves: ☐ Yes ☐ No
- The sand filter has a pump: ☐ Yes ☐ No

  (If "No," skip the rest of section 6)

- Pump vault appears to be watertight and in good condition: ☐ Yes ☐ No ☐ N/A
- Pump is functional: ☐ Yes ☐ No
- Pump control mechanism is functional (floats, pressure transducer): ☐ Yes ☐ No
- High water alarm in pump vault (audible and visual) is working: ☐ Yes ☐ No
- Pump electrical components are sealed and watertight: ☐ Yes ☐ No
- Additional Comments:

  _____

  _____

  _____

  _____

  _____

7. **Alternative Treatment Technology System**

   The owner of an ATT system *must* maintain an annual service contract with a certified Maintenance Provider. Maintenance records should be available from the system owner, or the contracted Maintenance Provider. **Please attach copies of the previous two years of maintenance records to this evaluation form.**

- The septic system has an **Alternative Treatment Technology (ATT):** ☐ Yes ☐ No

  (If "No," skip the rest of section 7)

- Please provide the product name, system id number, and manufacturer name below:

Product Name: _____

System ID Number: _____

Manufacturer Name: _____

- Previous two years of maintenance records are available: ☐ Yes ☐ No

  If you answered "No," please explain below:

  _____

  _____

  _____

- Previous two years of maintenance records are attached to this form: ☐ Yes ☐ No

  If you answered "No," please explain below:

  _____

  _____

- Additional Comments:

  _____

  _____

  _____

8. **Please attach a copy** of the following items to this form. Contact MCEH to locate these items.

- Please attach a **copy** of the original septic system permit to this form, if available.
- Please attach a **copy** of the original as-built drawing to this form, if available.
- Please attach a **copy** of the Certificate of Satisfactory Completion to this form, if available
- Additional Comments:

  _____

  _____

  _____

9. **Provide a Site Plan**

- Please provide a sketch of the complete system (show only system components that were evaluated) on page 8 of this form, if a copy of the original "as-built" drawing is *not* available.
- Please provide a sketch of the complete system on page 8 of this form if the original "as-built" drawing is *not* accurate or representative of the existing system.
- If the original "as-built" drawing is available for copy, and the original appears to be accurate and representative of the existing system, write "same as as-built" on page 8 of this form, and do not redraw the system.
- Additional Comments:

  _____

  _____

  _____

10. Water test for non-public water source:

    Please provide results of a standard bacterial water potability test.

11. **Disclaimer:**

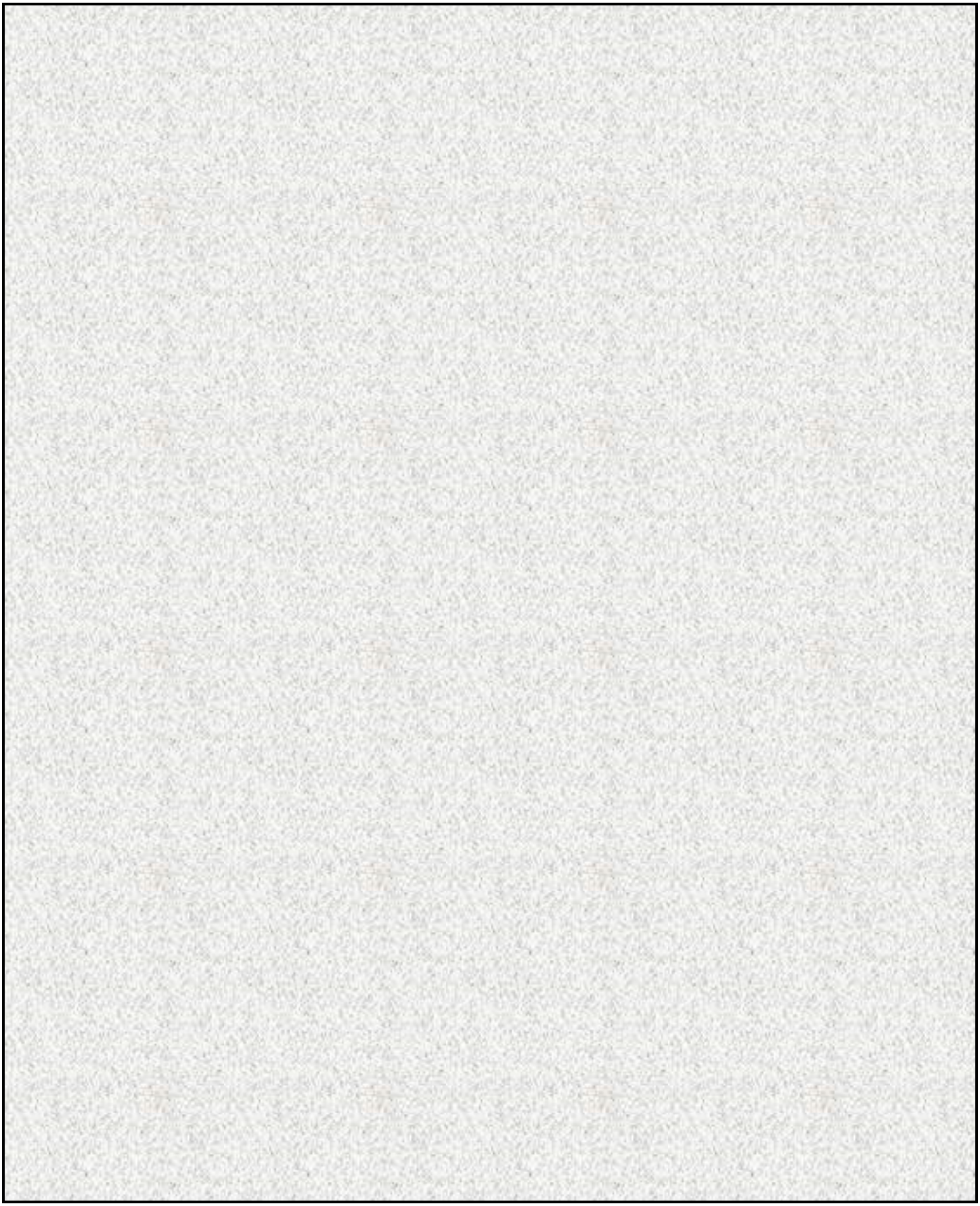
    This evaluation report describes the septic system as it exists on the date of evaluation and to the extent that components and operation of the system are reasonably observable. MCEH recognizes that this evaluation report does not provide assurance or any warranty that the system will operate properly in the future.

12. I hereby certify, by my signature, that the above information and the plot plan on the next page of this form are accurate and true to the best of my knowledge.

_____

Date Signature of Qualified System Evaluator

Provide a Site Plan in the space below: Show the actual or best estimate measurements of components that were confirmed during this evaluation; septic tank, soil absorption system, property lines (if known), easements (if known), existing structures, driveways, and water supply (water lines and wells). **Draw to scale and indicate the direction north.**



MODOC COUNTY OWTS STATISTICS

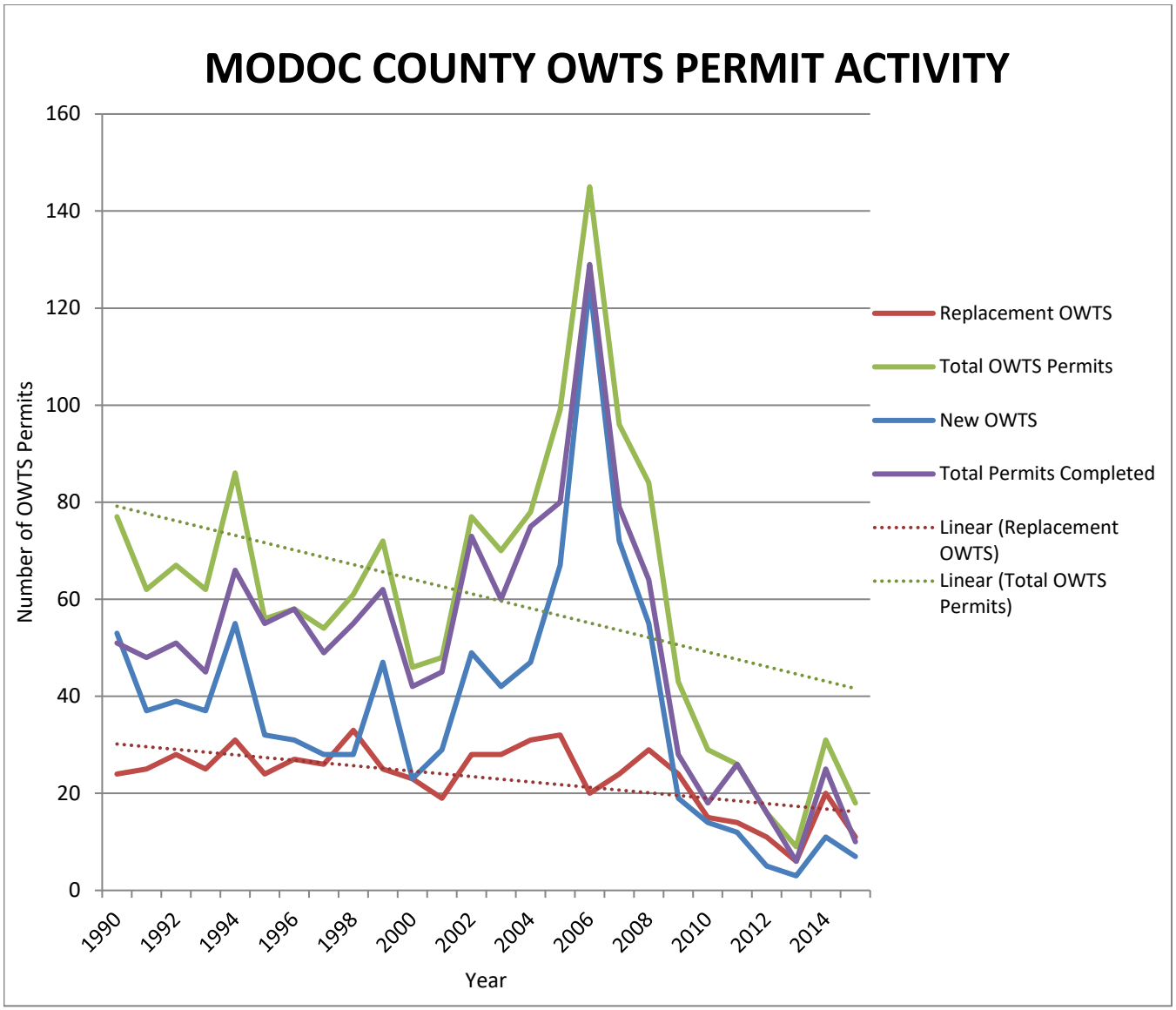
Year	New Number Installed	Replacement Number Installed	Total Permits	Total Permits Completed
1990	53	24	77	51
1991	37	25	62	48
1992	39	28	67	51
1993	37	25	62	45
1994	55	31	86	66
1995	32	24	56	55
1996	31	27	58	58
1997	28	26	54	49
1998	28	33	61	55
1999	47	25	72	62
2000	23	23	46	42
2001	29	19	48	45
2002	49	28	77	73
2003	42	28	70	60
2004	47	31	78	75
2005	67	32	99	80
2006	125	20	145	129
2007	72	24	96	79
2008	55	29	84	64
2009	19	24	43	28
2010	14	15	29	18
2011	12	14	26	26
2012	5	11	16	16
2013	3	6	9	6
2014	11	20	31	25
2015	7	11	18	10
TOTALS	967	603	1570	1316

Completion Rate	83.8%
Estimated annual failure rate (minor and major) using 3,003 permitted OWTS on file and repair permit stats.	0.77%

Oldest permit on file is from 1960

Annual Permit Statistics

Relacement Annual Average	23
New Annual Average	37
Total 26 yr Annual Average	60


MODOC COUNTY OWTS PERMIT ACTIVITY
Number of OWTS Permits
160
140
120
100
80
60
40
20
0
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
Year
Replacement OWTS
Total OWTS Permits
New OWTS
Total Permits Completed
Linear (Replacement OWTS)
Linear (Total OWTS Permits)

Soil Application Rates Comparison

SWRCB Tables 3 and 4 to Modoc LAMP Table 3 using variance in GPD rates and different methodology for calculated leach area

	Leach Area Calculation			Bottom Area 24"			Bottom Area 24"		
	Gallons per day per bedroom			150			112.5		
	Linear feet 2'			Equivalent Application Rate (gal/day/ft2)			Equivalent Application Rate (gal/day/ft2)		
	Soil Group			Soil Group			Soil Group		
Effective Soil Depth	A	B	C	A	B	C	A	B	C
18” to less than 24”	125	150	175	0.60	0.50	0.43	0.45	0.38	0.32
24” to less than 36”	100	125	150	0.75	0.48	0.50	0.56	0.36	0.38
36” to less than 48”	75	100	125	1.00	0.75	0.60	0.75	0.56	0.45
48"+	50	75	125	1.50	1.00	0.60	1.13	0.75	0.45

	Leach Area Calculation			Bottom Area + sidewall 24" + 6" = 30"			Bottom Area + sidewall 24" + 6" = 30"		
	Gallons per day per bedroom			150			112.5		
	Linear feet 2'			Equivalent Application Rate (gal/day/ft2)			Equivalent Application Rate (gal/day/ft2)		
	Soil Group			Soil Group			Soil Group		
Effective Soil Depth	A	B	C	A	B	C	A	B	C
18” to less than 24”	125	150	175	0.48	0.40	0.34	0.36	0.30	0.26
24” to less than 36”	100	125	150	0.60	0.48	0.40	0.45	0.36	0.30
36” to less than 48”	75	100	125	0.80	0.60	0.48	0.60	0.45	0.36
48"+	50	75	125	1.20	0.80	0.48	0.90	0.60	0.36

	Leach Area Calculation			Bottom Area + sidewall 24" + 12" = 36"			Bottom Area + sidewall 24" + 12" = 36"		
	Gallons per day per bedroom			150			112.5		
	Linear feet 2'			Equivalent Application Rate (gal/day/ft2)			Equivalent Application Rate (gal/day/ft2)		
	Soil Group			Soil Group			Soil Group		
Effective Soil Depth	A	B	C	A	B	C	A	B	C
18” to less than 24”	125	150	175	0.40	0.33	0.29	0.30	0.25	0.21
24” to less than 36”	100	125	150	0.50	0.40	0.33	0.38	0.30	0.25
36” to less than 48”	75	100	125	0.67	0.50	0.40	0.50	0.38	0.30
48"+	50	75	125	1.00	0.67	0.40	0.75	0.50	0.30

Modoc County Residential OWTS water saving adjustment flow calculation justification

FLOW CALCULATIONS

Assumptions:

- Average Persons per Household - 2.28 (2007-2011 US Census)
- Average Indoor Water use for a family of four as per building code changes in California. (Water Use in the California Residential Home, 2010)
    - 1975 – 252 gpd 63 gpd/person
    - 1990 – 204 gpd 51 gpd/person
    - 2009 – 162 gpd, 41 gpd/person
    - 2011 – 128 gpd, 32 gpd/person
- Average Daily per capita indoor use – 69.3 gpd (Residential End Uses of Water ,1999)
    - This would be 69.3 gpd x 2.28 people per dwelling ave = 158 gpd average dwelling in Modoc.
- California Average indoor water usage per capita – 59 gpd (DeOreo et al., 2011)
    - This would be 59 gpd x 2.28 people per dwelling ave = 135 gpd average dwelling in Modoc.
- Building Code Changes for water conservation requirements
    - 1994 Energy Policy Act would eventually see projected flow rates at 35-55 gpd/person after 2007.
- Estimated gallons per day, three bedroom dwelling with four people (EPA 2002, Table 3-1)
    - 65.1 gpd/per X 4 per = 260 gpd

Considering the latest data on residential water usage, Modoc County Environmental Health (MCEH) will break flows in two categories and prorate dwelling occupancy peek flows as per census statistics. The first category shall be pre 2007 constructed dwellings using flow estimations relative to data from 1984-

1999. This category recognizes the possibility that low flow fixtures or appliances are partially or not at all installed. The second category, post 2007 construction, assumes low flow fixtures are installed and the majority of appliances meet 2007 water and energy standards. California Green Building Standards Code (CGBSC) will improve water efficiency even further by 2011. Pre 2007 residential dwellings can utilize the post 2007 flow estimates if the owner demonstrates all water fixtures and appliances meet current water usage/flow standards.

Peek flows for both flow design estimates are buffered by an additional 25% and prorated as the dwelling increases bedrooms assuming census statistics remain at 2.28 persons per household. Peek flows are additionally mitigated by evapotranspiration characteristics in Modoc County. Residential dwellings that are upgraded or constructed post 2011 to CGBSC standards will only increase the buffer between average daily use and peek flows.

Utilizing flow calculations for residential wastewater in two tiers will encourage installation of water saving fixtures and appliances. The savings in leach area construction will offset the cost of upgrading fixtures and appliances. See cost comparison in Table 2.

Residential OWTS will utilize percolation rates and/or soil profile characteristics to determine application rate. Estimated residential design flows are listed in Table 1.

Table 1 - Residential OWTS flow rates

Number of dwelling bedrooms	Est. # persons	Peek flow adjustment	Est. flows pre 2007 construction per person gpd**	Est. flows pre 2007 construction gpd**	Est. flows post 2007 construction per person gpd*	Est. flows post 2007 construction gpd*	Percentage Difference
1	2	1.25	75	188	50	125	34%
2	3	1.25	75	281	50	188	33%
3	4	1.25	75	375	50	250	33%
4	5	1	75	375	50	250	33%
additional	6	1	75	450	50	300	33%

*Assuming water use is meeting the 1994 Energy Policy Act (EPACT) standards for efficient water flow fixtures and appliances.

** Pre 2007 constructed dwellings can utilize post 2007 flow calculations if water saving fixtures and appliances are demonstrated.

Table 2 - Pre 2007 constructed three bedroom home septic system replacement upgrade cost comparison.

Residential Dwelling - three bedroom	Soil Application rate in gal/sq ft (clay loam soil)	Estimated gpd	Required leach area in sq ft	Length of High Capacity chamber in feet (4 sq ft leach area per linear ft)	A. Estimated Cost per linear foot of chamber installed	B. Estimated Cost per linear foot of chamber installed	Estimated Cost at price A	Estimated Cost at price B
Pre 2007 const. daily flow rate	0.2	375	1,875	469	$10	$15	$4,688	$7,031
Post 2007 const. daily flow rate	0.2	250	1,250	313	$10	$15	$3,125	$4,688
Difference between upgrading fixtures and water using appliances on leach area cost.							$1,563	$2,344

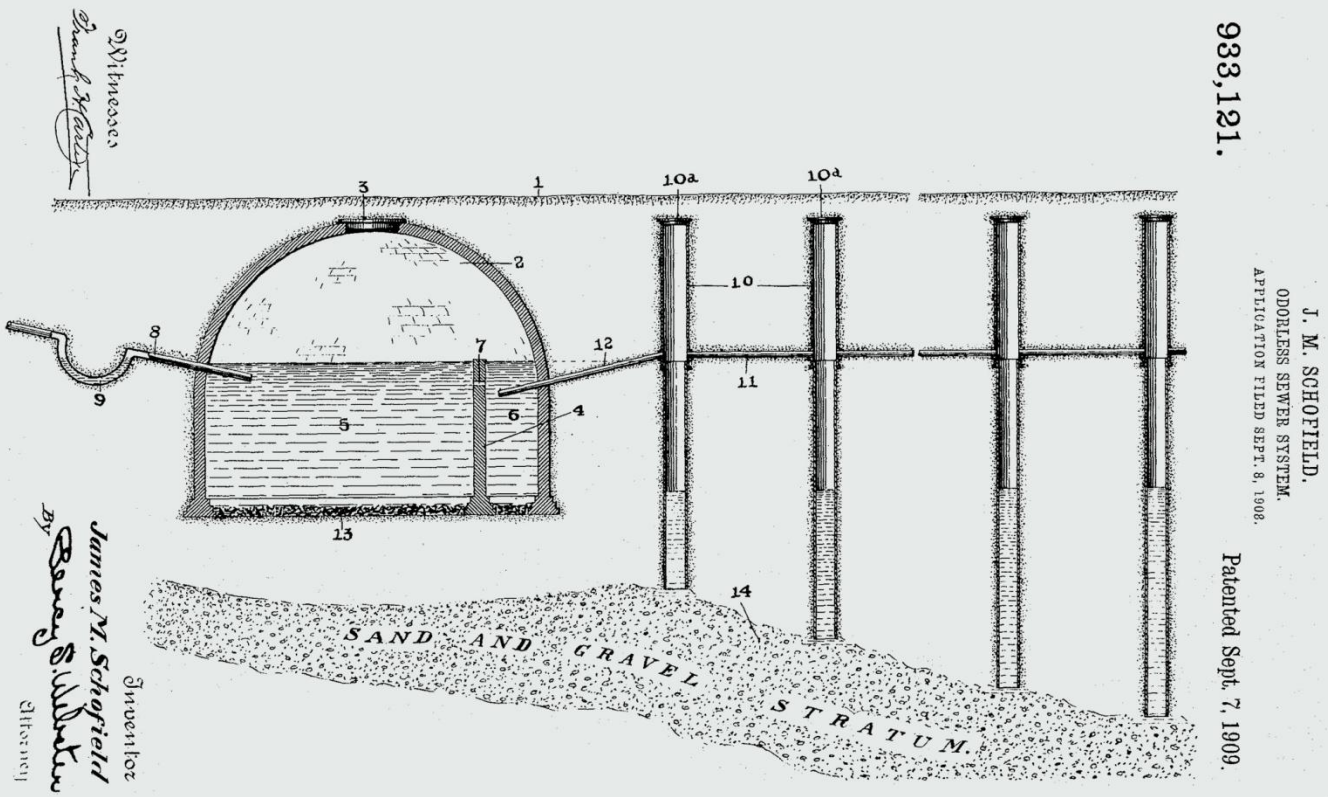
Applying Reduction Comparison to Existing Flow Calculations

Since there have been great strides to incorporate water saving devises in homes it would only be prudent we find a way to incorporate the water savings reduction into OWTS design flow calculations. There are a multitude of reasons why this makes sense, here are just a few:

1. We are still designing to half a century old standards that do not take into account reductions in water use.
2. Over sizing leach area, in some circumstances, reduces treatment and can negatively impact water quality. Healthy biomats are essential for maximum treatment of effluent.
3. Offering a reduction to design criteria is a great opportunity to increase the use of water saving fixtures and appliances in pre 2007 buildings.

For the reduction to work a degree of design safety needs to be considered. The original safety factor that resulted in a factor that doubled actual predicted use (US EPA 2002) is a good baseline. Table one shows us that the water saving efforts shows a mean reduction of 33% in water use between pre and post 2007 dwellings. Table two shows a cost savings applied to the 33% reduction which is significant and can encourage installation of water saving appliances and fixtures in pre 2007 dwellings. A design flow reduction of 25% is reasonable and provides a safety factor in line with US EPA and will still provide a significant incentive to install water saving devices.

To apply this reduction to the Modoc County LAMP design flows (Table 2) an application process to assess the legitimacy of the water savings reduction and a condition of use will need to be added to the permit.



OWTS POLICY

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

June 19, 2012

CALIFORNIA
Water Boards

STATE WATER RESOURCES CONTROL BOARD

REGIONAL WATER QUALITY CONTROL BOARDS

State of California
Edmund G. Brown Jr., Governor

California Environmental Protection Agency
Matthew Rodriquez, Secretary

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

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

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

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

Preamble – Purpose and Scope – Structure of the Policy

Preamble

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

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

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

Purpose and Scope of the Policy

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

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

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

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]

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.

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 then 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

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;

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.

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

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:

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.

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

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

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

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;

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.

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.

Table 1: Allowable Average Densities per Subdivision under Tier 1.

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.

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 ≤1 MPI	Only as authorized in a Tier 2 Local Agency Management Program
1 MPI< Percolation Rate ≤ 5 MPI	Twenty (20) feet
5 MPI< Percolation Rate ≤ 30 MPI	Eight (8) feet
30 MPI< Percolation Rate ≤ 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 Manage-ment 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.

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.

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

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.

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

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.

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

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.

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 – Advanced Protection Management Programs for Impaired Areas

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

10.0 Advanced Protection Management Program

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

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

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

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

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

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

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

10.4.1.1 Whether supplemental treatment should be required.

10.4.1.2 Whether routine inspection of the OWTS should be required.

10.4.1.3 Whether monitoring of surface and groundwater should be performed.

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

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

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

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

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

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

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

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

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

10.5.1.5 A description of the distribution box, dosing siphon, or distribution pump, and if flow is being equally distributed throughout the dispersal system, as well as any evidence of solids carryover, clear water infiltration, or evidence of system backup.

10.5.1.6 A description of the dispersal system including signs of hydraulic failure, condition of surface vegetation over the dispersal system, level of ponding above the infiltrative surface within the dispersal system, other possible sources of hydraulic loading to the dispersal area, and depth of the seasonally high groundwater level.

10.5.1.7 A determination of whether the OWTS is discharging to the ground's surface.

10.5.1.8 For a water body listed as an impaired water body for pathogens, a determination of the OWTS dispersal system's separation from its deepest most infiltrative surface to the highest seasonal groundwater level or fractured bedrock.

10.5.1.9 For a water body listed as an impaired water body for nitrogen, a determination of whether the groundwater under the dispersal field is reaching the water body, and a description of the method used to make the determination.

10.6 For new, replacement, and existing OWTS in an Advanced Protection Management Program, the following are not covered by this Policy's waiver but may be authorized by a separate Regional Water Board order:

10.6.1 Cesspools of any kind or size.

10.6.2 OWTS receiving a projected flow over 10,000 gallons per day.

10.6.3 OWTS that utilize any form of effluent disposal on or above the ground surface.

10.6.4 Slopes greater than 30 percent without a slope stability report approved by a registered professional.

10.6.5 Decreased leaching area for IAPMO certified dispersal systems using a multiplier less than 0.70.

10.6.6 OWTS utilizing supplemental treatment without requirements for periodic monitoring or inspections.

10.6.7 OWTS dedicated to receiving significant amounts of wastes dumped from RV holding tanks.

10.6.8 Separation of the bottom of dispersal system to groundwater less than two (2) feet, except for seepage pits, which shall not be less than 10 feet.

10.6.9 Minimum horizontal setbacks less than any of the following:

10.6.9.1 150 feet from a public water well where the depth of the effluent dispersal system does not exceed 10 feet in depth;

10.6.9.2 200 feet from a public water well where the depth of the effluent dispersal system exceeds 10 feet in depth:

10.6.9.3 Where the effluent dispersal system is within 600 feet of a public water well and exceeds 20 feet in depth the horizontal setback required to achieve a two-year travel time for microbiological contaminants shall be evaluated. A qualified professional shall conduct this evaluation. However in no case shall the setback be less than 200 feet.

10.6.9.4 Where the effluent dispersal system is within 1,200 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 400 feet from the high water mark of the reservoir, lake or flowing water body.

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

10.6.9.6 For replacement OWTS that do not meet the above horizontal separation requirements, the replacement OWTS shall meet the horizontal separation to the greatest extent practicable. In such case, the replacement OWTS shall utilize supplemental treatment and other mitigation measures.

10.6.9.7 For new OWTS, installed on parcels of record existing at the time of the effective date of this Policy, that cannot meet the above horizontal separation requirements, the OWTS shall meet the horizontal separation to the greatest extent practicable and shall

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

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

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

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

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

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

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

10.8.3 Comply with any applicable Local Agency Management Program requirements.

10.9 Supplemental treatment requirements for nitrogen

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

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

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

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.

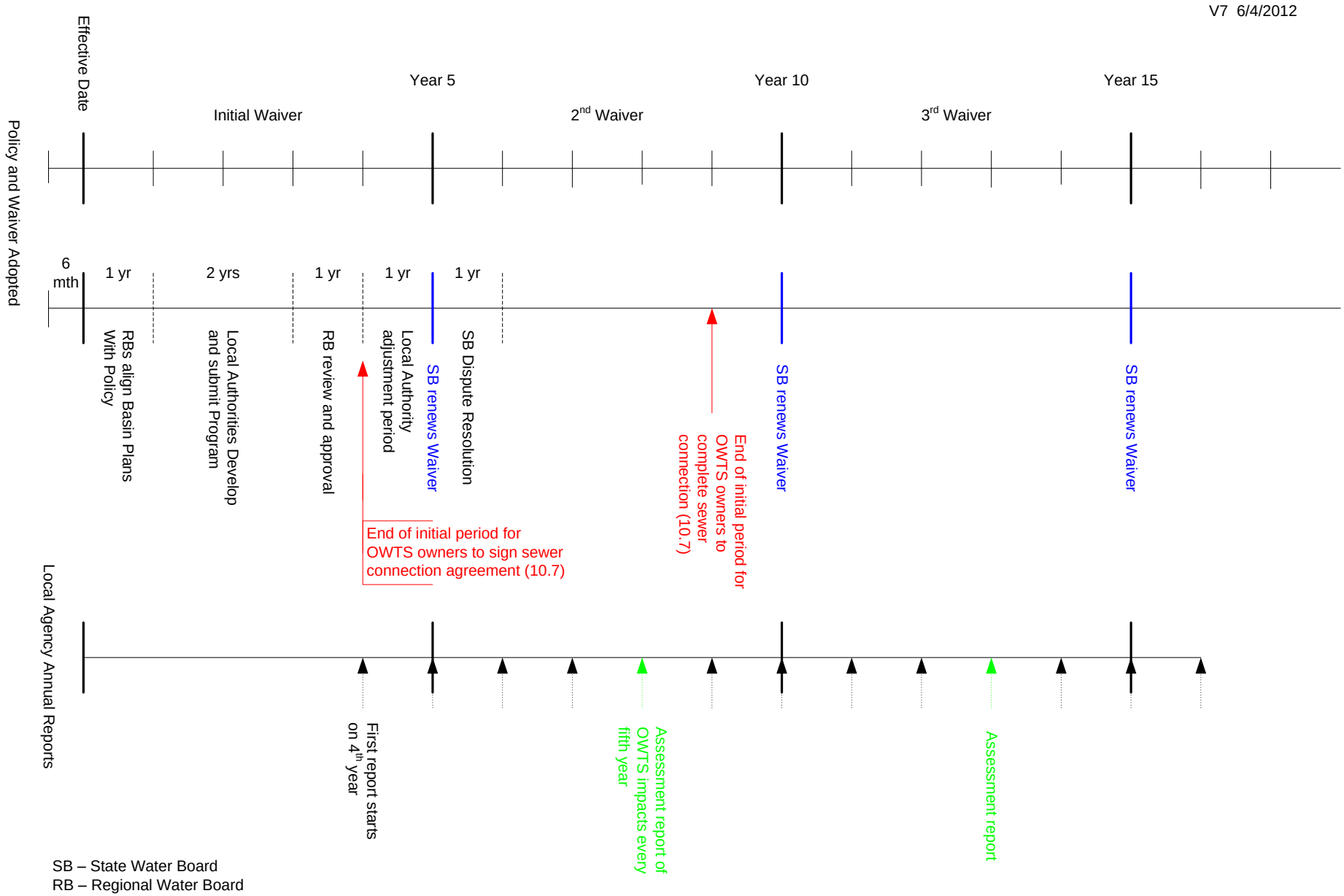
14.1 Loan interest rates for loans to local agencies will be set by the State Water Board using its policies, procedures, and strategies for implementing the Clean Water State Revolving Fund program, but will typically be one-half of the States most recent General Obligation bond sale. Historically interest 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



SB – State Water Board
RB – Regional Water Board

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