CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION
MEETING OF SEPTEMBER 14-15, 2016
APPLE VALLEY

ITEM 10
WORKSHOP - ONSITE WASTEWATER TREATMENT SYSTEM (OWTS) POLICY IMPLEMENTATION

CHRONOLOGY	
January 14, 1988	Water Board adopts amendments to the Water Quality Control Plan for the Lahontan Region (Basin Plan) establishing new criteria for the use of individual onsite wastewater treatment systems (OWTS, or septic tanks). Separately, over the next few years the Executive Officers signs Memoranda of Understanding with local agencies to implement criteria.
June 19, 2012	State Water Board adopts the OWTS Policy with an effective date of May 13, 2013.
July 17, 2013	Water Board conducted informational workshop on the OWTS Policy

BACKGROUND

The OWTS policy establishes a statewide, risk-based, tiered approach to the regulation and management of OWTS systems. It recognizes local permitting agency flexibility by allowing in Tier 2, local agencies to propose a Local Agency Management Program (LAMP) for approval by regional boards. Lahontan Water Board is the lead for approving five county and four city LAMPs by May 13, 2017. Other Regional Water Boards are the lead for approving seven county LAMPS that are partially in the Lahontan Region. The staff report (Enclosure 1) describes intended staff direction to implement the OWTS policy, identifies major policy items, and seeks Board concurrence to address LAMP deficiencies with the local agencies. The OWTS Policy Fact Sheet (Enclosure 2) provides an overview of the policy and its tiers (Tier 0 through Tier 4).

Until May 13, 2018, local agencies may continue to approve OWTS under the Memoranda of Understandings (MOU). After that date, the OWTS Policy (Enclosure 3) requires all OWTS approvals to follow either the statewide criteria (Tier 1) or an approved LAMP (Tier 2).

ISSUES

Staff has provided comments to El Dorado County, Kern County, and San Bernardino County on their draft LAMPs. After reviewing the other draft LAMPs received to date, the following four main policy issues are identified.

1. *Density* – As the numbers of OWTS increase (and especially on smaller lot sizes), the impact of effluent discharges on receiving waters increases. Limiting overall density is one means of protecting water quality. The Water Board will need to assess how water quality will be protected by proposed density criteria in each draft LAMP. Most LAMP proposals support our Board's past criteria of ½ acre lot size as compared to the newer State Water Board Tier 1 density criteria based on rainfall (in some cases the difference between a ½ acre lot and 2½ acre lot sizes). *Should the Water Board consider a more protective density criteria as established in State Water Board's Tier 1 as compared to status quo?*

2. *Water Quality Assessment Programs* – Local agencies proposing a LAMP must implement a program to evaluate the impact of OWTS discharges and assess the extent to which groundwater and surface water quality may be adversely impacted. All draft LAMPs have proposed a program. No program proposes to install monitoring wells due to cost and intend to rely upon existing groundwater and surface water data collected by others. Water Board staff to date have encouraged cooperation and partnering to obtain water quality analyses focused in areas of highest risk. *Should the Water Board consider a targeted water quality monitoring program in high risk areas rather than a comprehensive geographic approach, or another monitoring approach?*

3. *Approvals and Referrals of Supplemental Treatment Systems* - The OWTS Policy allows local agencies to approve OWTS up to a flow of 10,000 gal/day and at their discretion refer any system to the Water Board for regulation under waste discharge requirements. It also allows local agencies to propose criteria for Supplemental Treatment Systems (STS) to provide additional wastewater treatment to meet performance criteria prior to effluent discharge into a dispersal system. Some local agencies may refer all STS to the Water Board for regulation under waste discharge requirements. Other local agencies propose regulating STS but may not have adequate resources to ensure program effectiveness. We need to ensure LAMPs define clear expectations for STS review and approval. *What local agency program elements are critical to allow local agency to review and approve STS?*

4. *Local Agency Funding* – Current fees and assessments may be inadequate for implementing the LAMPs as required. Local agencies may have to increase funding to pay for increased staffing and monitoring costs. *How will the Water Board determine if adequate funding is available to a local agency to implement an effective program?*

DISCUSSION
The Basin Plan includes both Prohibitions and Criteria for OWTS. The criteria are in Section 4.4 and Appendix C (Enclosure 4). After May 13, 2018, the Memoranda of

Understandings with local agencies will cease to have effect and be replaced with either Tier 1 (Statewide criteria) or Tier 2 (LAMPs).

The Lahontan Water Board Basin Plan contains previously acceptable OWTS density criteria include restricting discharges to 500 gal/acre/day or two equivalent dwelling units (EDU) per acre based on 250 gal/EDU. Installation of OWTS were allowed on lots having a net area greater than or equal to 15,000 square feet at subdivisions approved before 1988. The new State Board OWTS Policy incorporated into the Lahontan Water Board Basin Plan has more restrictive density criteria based on rainfall.

The concerns with OWTS effluent are public health effects from pathogens, increased nitrate and salt concentrations. The high risk areas potentially affected by OWTS discharges may generally be categorized as areas with the following.

- High density of OWTS
- Shallow soil over bedrock (allowing surfacing effluent or discharge to surface water)
- Shallow groundwater
- Surface Waters

Staff intends to work with local agencies and other regional boards to ensure the above four policy issues are sufficiently addressed to meet the OWTS Policy and protect water quality. To improve water quality assessment programs, staff will request targeted monitoring in identified high risk areas and request local agencies identify any existing supply wells or dedicated monitoring wells that could be used as well as any existing and ongoing water quality data from all available sources that may be used for the required periodic water quality performance assessments. Staff will meet with local agencies and other regional board staff to address concerns before the final LAMPs are submitted for Water Board consideration. In 2017, we anticipate bringing nine LAMPs to the Water Board for consideration of approval by resolution.

PUBLIC OUTREACH/INPUT

Staff have met with or discussed the OWTS Policy with representatives of all the counties and local agencies that are proposing LAMPS. In some cases, multiple meetings have occurred. Staff conducted numerous conversations with other regional board and local agency staff where Lahontan Region is not the lead.

Additionally, the Water Board conducted a Workshop at its July 17, 2013 meeting in Barstow providing an overview of the OWTS Policy and milestone dates.

RECOMMENDATION

This is an information item only. The Water Board may provide direction to staff as appropriate. Water Board may also request periodic updates on progress or schedule additional workshops focused on the policy issues.

ENCLOSURE	ITEM	BATES NUMBER
1	Staff Report, Status of Implementing the State Board's Onsite Wastewater Treatment Systems (OWTS) Policy, also called Septic Systems, September 2016	**10-7**
2	OWTS Policy Fact Sheet	**10-33**
3	OWTS Policy, Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems, June 19, 2012	**10-37**
4	Water Quality Control Plan for the Lahontan Region (Basin Plan), Section 4.4 Municipal and Domestic Wastewater: Treatment, Disposal and Reclamation and Appendix C Regional Board Guidelines for Implementation of Criteria for Individual Waste Disposal Systems	**10-91**
5	LAMP local government comment letters	**10-115**
6	Staff Presentation	**10-143**

ENCLOSURE 1

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LAHONTAN WATER QUALITY CONTROL BOARD STATUS OF IMPLEMENTING THE STATE BOARD'S ONSITE WASTEWATER TREATMENT SYSTEMS (OWTS) POLICY, ALSO CALLED SEPTIC SYSTEMS

September 2016

DRAFT

Report to the Lahontan Regional Water Quality Control Board
Patty Z. Kouyoumdjian
Executive Officer

CALIFORNIA
Water Boards
LAHONTAN REGION

STATUS OF IMPLEMENTING THE STATE BOARD'S ONSITE WASTEWATER TREATMENT SYSTEMS POLICY

STATE OF CALIFORNIA
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STATUS OF IMPLEMENTING THE STATE BOARD'S ONSITE WASTEWATER TREATMENT SYSTEMS POLICY

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I. Purpose

The purpose of this Staff Report is to provide the California Regional Water Quality Control Board, Lahontan Region (Water Board) and public with the status of implementing in the Lahontan Region, the State Water Board's Onsite Wastewater Treatment Systems (OWTS) Policy. OWTS are also called septic systems. This report discusses: 1) the current regulatory approach for domestic wastewater treatment and disposal described in the Water Quality Control Plan for the Lahontan Region (Basin Plan), 2) OWTS Policy elements and milestones, and intended staff direction to implement the policy. Differences between the current and future regulatory approach under the OWTS Policy are described. The OWTS Policy establishes five tiers of governance; Tier 0 – Tier 4. Staff seeks Board member concurrence on proposed direction to address Local Agency Management Plan (LAMP) deficiencies with counties and municipalities.

Water Board staff have identified four major policy issues that require attention prior to Water Board consideration of LAMP approvals.

- *1. Septic System discharges with high density can be sources of pollutants to surface waters with nutrients and pathogens and contribute to groundwater degradation and pollution with nitrate and salt. The State Board OWTS Policy set forth density criteria in Tier 1 based on a water quality risk-based model. Tier 2 allows local agencies to develop other density criteria if it can be shown to be as protective.*

- *2. OWTS Policy requires Water Quality Assessment Programs. At a minimum, areas likely to have the greatest impact from future septic systems should be assessed by measuring water quality conditions over time. These high risk areas include the groundwater basins at the lower slopes of the San Bernardino and San Gabriel Mountains (e.g. Antelope Valley and Mojave groundwater basins); areas with shallow soil such as in the San Bernardino Mountains, and areas with shallow usable ground water such as the Woodfords area (West Fork Carson River), unincorporated areas around the City of Susanville such as Johnstonville, and high density areas with septic systems, such as Doyle.*

- *3. OWTS Policy allows local agencies to approve OWTS up to a flow of 10,000 gallons per day or OWTS with Supplemental Treatment System (STS). A local agency can also refer any system to the Water Board for regulation under waste discharge requirements. LAMPs should clearly identify local agency plans for permitting various types of systems, including the establishment of performance monitoring for STS.*

- *4. Local Agency Funding – Current fees and assessments may be inadequate for implementing the LAMPs as required. Local agencies may have to secure additional funding to pay for increased staffing and monitoring costs.*

II. Background

In the Lahontan Region, both community wastewater treatment and disposal systems and individual septic systems are used to manage domestic wastewater discharges. At only two facilities, Susanville Consolidated Sanitary District and Victor Valley Wastewater Authority, the Water Board authorizes discharges of treated wastewater to surface waters. The Water Board has adopted more than 50 individual waste discharge requirements for wastewater treatment and disposal systems for communities or single large volume facilities. The location of these discharges is presented in Figure 1. These systems rely on evaporation, reuse, and/or percolation of treated wastes to groundwater. All of these regulated facilities are required to conduct some form of monitoring and reporting to ensure protection of water quality. Where individuals or subdivisions do not have readily available community wastewater collection systems, individual onsite wastewater treatment systems are employed in the remainder of our region. And in very few locations, individuals must rely on holding tanks to store domestic wastewater with transport to a community wastewater system.

At individual locations septic tanks are installed for solids removal with disposal by sub-surface leach lines or seepage pits (dispersal system). To ensure public health and safety is protected, the Lahontan Water Quality Control Plan has minimum criteria (last updated in 1988) that is also required by local government public health officers for new and replacement systems. Water quality impacts associated with pathogens and nutrient loading to receiving surface and groundwater are addressed through compliance with the criteria. In 2012, the State Water Board adopted by resolution (Ref. 1) the OWTS Policy (Ref. 2) (included as an enclosure) setting minimum criteria under Tier 1 and also allowing local agencies to develop equally protective criteria under Tier 2 (Local Agency Management Plans or LAMPs)

II. A. Septic System Impacts to Receiving Groundwater

Septic system discharges are a recognized source of pollutants to groundwater. In California there are an estimated 1.2 million systems (Ref. 2). Staff has no estimate of the number of systems in the Lahontan Region but there are many thousands. The effluent quality varies by each system. A comparison of typical domestic sewage for selected parameters and typical septic tank effluent is shown in Table 1 and 2 respectively.

Table 1 - Typical Composition of Untreated Domestic Sewage*

Contaminant	Units	Low Strength	Medium Strength	High Strength
Biochemical Oxygen Demand (BOD)	mg/L	110	190	350
Nitrogen (total as N)	mg/L	20	40	70

*Tchobanoglous and Burton, 1991 (Ref. 3)

Table 2 – Typical Septic Tank Effluent and Soil Water Quality*

Contaminant	Units	Septic Tank Effluent	Soil Water at 2' below dispersal depth	Soil Water at 4' below dispersal depth
Biochemical Oxygen Demand (BOD)	mg/L mean	93.5	<1	<1
Total Kjeldahl Nitrogen (total as N)	mg/L mean	44.2	0.77	0.77
Nitrate (as N)	mg/L mean	0.04	21.6	13.0

*EPA, 2002, Table 3-18 (Ref. 4)

Pathogens are typically removed in shallow soil beneath the dispersal system unless there is very shallow groundwater or rock fractures allowing rapid infiltration. Table 2 shows that septic tank effluent BOD concentrations are reduced through solids removal by settling and biological activity in shallow soil. Nitrogen concentrations are similar between untreated domestic sewage and septic tank effluent. All effluent nitrogen is typically in the form of ammonia and organic nitrogen represented by Total Kjeldahl Nitrogen (TKN). In shallow soil beneath the dispersal system, most nitrogen is converted to nitrate which remains higher than the drinking water standard of 10 mg/L nitrate-nitrogen, and thus a pollution source to receiving water. Salts, or Total Dissolved Solids (TDS), concentrations typically increase in domestic sewage by about 250 mg/L over the potable water source supply and are not removed in septic systems. Thus, for both TDS and Nitrate, the cumulative effect on receiving groundwater is a function of septic system density, soil type, depth to groundwater, and underlying soil stratigraphy. Based on a recent study (Ref. 5), the higher the septic system loading rate (number of systems and density) the more likely impacts will be observed and larger in magnitude. (This study covered septic systems in Joshua Tree, Yucca Valley, and El Mirage (all located within the jurisdiction of the Colorado River Regional Water Quality Control Board). These areas have similar climate as the desert regions in the Lahontan Water Board).

II. B. Septic System Issues in Lahontan Region

Over the years, septic system issues in the Lahontan Region have been identified and addressed in various ways. Some issues remain for future resolution. Table 3 summarizes some of these issues and describes either how they were addressed or current efforts underway, planned or needed to address these problems. This list is not comprehensive. For some problem areas that remain there is insufficient data to adequately characterize the sources, water quality impacts, and risks.

Table 3 – Septic System Issues in Lahontan Region

Area	Problem Suspected or Known	How Resolved or Effort Underway
Lassen County, Spalding Tract and Stones-Bengard Subdivisions, Eagle Lake	Contributing bacteria to adjacent individual domestic wells and nutrients to surface water.	Resolved. 1984 prohibition against septic systems leading to two centralized sewer collection and evaporation systems.
Lake Tahoe Basin	Contributing nutrients to surface water.	Resolved. 1972 prohibition against all disposal of domestic sewage within the basin leading to centralized sewer collection system with export of all sewage outside the basin.
Mobile Home Park, Woodfords, Alpine County	Failing dispersal system due to shallow groundwater (surfacing effluent)r.	Remains. Replaced system failed. Candidate for enhanced treatment and disposal system.
Twin Lakes, Mono County	Dozens of systems suspected contributor of nutrients to surface water	Remains. Development is limited because Basin Plan (Ref. 6) density criteria limits new systems being installed.
Mustang Mesa, Inyo County	Failing systems due to shallow soil over volcanic tuff and fractures allowing rapid infiltration to adjacent surface water.	Resolved. A MOU with Inyo County allows development with alternative dispersal "mound" systems with sand infiltration.
Lenwood, San Bernardino County	Failing systems due to age with surfacing effluent.	Resolved. Grants obtained to install sewers.
Wrightwood, San Bernardino County	Failing systems due to small lots or surfacing groundwater in high precipitation years.	Remains. Water Board staff recommends the San Bernardino County WQAP include restoration of monitoring at the Wrightwood monitoring well.[1] Water Board staff also supports a proposed feasibility study to evaluate sewerage options.[2]
Victor Valley, San Bernardino County	High density of systems generally on smaller than ½ acre lots suspect are contributing to increasing nitrates and TDS in	Partially Resolved. Sewers installed in 1970's. Many areas along Mojave River in Hesperia, Apple Valley, and unincorporated San

Area	Problem Suspected or Known	How Resolved or Effort Underway
	groundwater.[3]	Bernardino County are not connected to sewers. Targeted groundwater monitoring needed to evaluate trends.
San Bernardino Mountains, San Bernardino County	Shallow surface soil over granite bedrock allows surfacing effluent during high precipitation years. Historical stream impacts due to pathogens.	Partially Resolved. Basin Plan prohibition for new systems. Exemptions allowed under conditions. Sewers installed in Lake Arrowhead and Crestline. Some areas unsuitable for sewers due to terrain. Targeted surface water monitoring needed to assess areas and degree of pollution.
Littlerock, Pearblossom, Quartz Hill, Lake Los Angeles, Los Angeles County	Nitrate groundwater pollution reported in drinking water wells.	Remains. Increasing density of septic systems generally on ½ acre lots. Water Board staff will request Los Angeles County conduct monitoring in these areas. Evaluation of sewerage options is needed.
North Barstow	Area of increased suburban development may lead to nitrate pollution in groundwater. Some areas have private wells.	Remains. Private groundwater sampling has shown increases in nitrate.
Johnstonville, CA	Some wells have had detections of nitrate above the drinking water standard	Remains. Source is unknown, but individual houses, school and commercial development provide their own OWTS service. More information is needed.

[1] This well was monitored under WDRs of Board No. 6-76-38 from 1976 to 2013. Water Board rescinded the WDR in 2013 because there was no publicly owned treatment facility with a waste discharge.
[2] San Bernardino LAFCO July 11, 2016 staff report recommended that the new Wrightwood CSD be authorized to include wastewater for the planning of a regional sewer entity. In August 2016, Water Board sent letter of support.
[3]This is confirmed in the *Mojave Salt and Nutrient Management Plan* (Ref. 7). Nitrate levels in some wells in the vicinity of the Mojave River are as high as 4 mg/L, which is above background. TDS is increasing also.

II. C. Basin Plan Prohibitions

In addition to the areas and specific issues and concerns identified above, the Water Board established a number of basin plan prohibitions limiting or prohibiting installation of new OWTS based on threat or observed impact from existing OWTS in these watersheds. These prohibitions currently provide criteria allowing the Executive Officer to authorize exemptions and remain in effect following State Board adoption of the OWTS Policy. Table 4 summarizes the Basin Plan prohibition areas.

Table 4 – Basin Plan Septic System Prohibition Areas

Hydrologic Unit	Name	Exemption Allowed
Susanville	Cady Springs Area	Yes
Eagle Drainage	Spalding Tract & Stones-Bengard Tract	No
Lake Tahoe	Basinwide	No
Mono-Owens	Rush Creek above Grant Lake	Yes
Mono-Owens	Mammoth Creek above 7,500 ft.	Yes
Mono-Owens	City of Bishop	Yes
Mono-Owens	Rocking K Subdivision	Yes
Mono-Owens	Assessment District No. 1 (Eastern Sierra CSD)	Yes
Mono-Owens	Assessment District No. 2 (Mountain View Estates and Aspendell)	Yes
Mono-Owens	Hilton Creek	Yes
Mojave	Silverwood Lake Watershed	Yes
Mojave	Deep Creek Watershed above 3,200 ft.	Yes
Mojave	Grass Valley Creek Watershed above 3,200 ft.	Yes

These prohibitions were adopted to encourage connection to community sewer systems or restrict further development on septic systems in order to protect surface and ground waters that may provide sources of drinking water , to prevent accelerated eutrophication (or increased algae in streams) that adversely impact aesthetics (non-contact recreation), water contact recreation, and aquatic habitat.

- *In the draft LAMPS, both Inyo and Mono County recommended that some septic prohibitions be lifted. These requests must be addressed outside of the LAMP approval because they require review, and possible revision, of the Basin Plan. However, the counties may provide evidence including water quality data to support the lifting of a basin plan prohibition*

When sewer collection systems were installed in the San Bernardino Mountain communities of Crestline and Lake Arrowhead, certain areas were considered infeasible to install sewers due to shallow soil and steep terrain. The Water Board issued two

waste discharge requirements excluding certain areas from the prohibition requirements of the San Bernardino Mountains. Limited surface water monitoring is conducted by Crestline and Lake Arrowhead Community Service Districts, but not required by the orders. These orders are:

- 6-81-3 – Exemption from Prohibitions for Designated Portions of Crestline Sanitation District

- 6-84-93 – Exemption from Prohibitions for Designated Portions of Lake Arrowhead Community Services District

➢ *Separate from LAMP review, staff should meet with Crestline and Lake Arrowhead Community Services Districts, review surface water data, and evaluate whether the exemptions from prohibitions should be continued or revised.*

II. D. Current Septic System Regulatory Approach

Counties and local agencies primarily regulate OWTS through issuance of building permits for new and systems, after site and design criteria are approved by local health departments. After adopting Basin Plan amendments in 1987, the Water Board Executive Officer entered into Memoranda of Understanding (MOUs) with County Health Departments and City governments to ensure the Water Board's Basin Plan criteria are implemented as part of their approval. The counties and local agencies for which the Water Board has entered into a MOU are shown in Table 5.

Table 5 – Region 6 Local Agencies with Septic Guideline MOUs

Agency	Date Water Board Signed MOU
Adelanto, City of	March 24, 1989
Alpine County	July 2, 1990
Apple Valley, Town of	February 6, 1990
Barstow, City of	October 28, 1988
California City, City of	March 24, 1989
Hesperia, City of	December 20, 1989
Inyo County	February 6, 1990
Kern County	December 20, 1989
Lassen County	November 1, 1989
Los Angeles County	September 26, 1989
Modoc County	December 26, 1989
Mono County	January 5, 1989
Nevada County	December 31, 1989
Placer County	March 31, 1989

The MOUs authorize Local Agencies to issue septic system construction permits for subsurface disposal systems for domestic wastewater provided the Basin Plan's criteria are followed.

A 1987 Water Board staff report (Ref. 8) recommended a minimum lot size of ½ to 7.9 acres based on a literature review and current research and available data to protect receiving groundwater from nitrate pollution. To address the concerns of local governments that future growth would be restricted, the final adopted Basin Plan amendments essentially established a "½-acre" policy. Lots subdivided after August 17, 1987 must not exceed two equivalent dwelling units (EDU) per acre (500 gal/acre/day, where one EDU is 250 gal/day). The minimum size for a single family home on a lot subdivided before June 16, 1988 must not be less than 15,000 square feet (ft^2). Local agencies may not approve industrial waste discharges.

Exemptions to the criteria may be sought from the Executive Officer who may: 1) deny the exemption, 2) authorize the exemption, or 3) request the discharger to submit a report of waste discharge.

Through the 1990's the number of septic system criteria exemption referrals to the Water Board from local agencies was about 1-2 per month. That number is decreasing and now is about 6 – 10 per year. A typical request is for an exemption to the density criteria and Executive Officer responses have ranged from denial to acceptance.

II. E. OWTS Policy Incorporated in the Basin Plan

In the most recent amendments, the Water Board incorporated the OWTS Policy by reference into the Basin Plan. The Basin Plan states that (1) existing septic systems are allowed to continue in operation unless they are not properly functioning or the Regional Board finds they are not able to adequately protect water quality and (2) local agencies are allowed to continue to permit existing, new, and replacement septic systems under their existing program until the earlier of (a) an approved LAMP or (b) May 13, 2018.

III. OWTS Policy

III. A. OWTS Policy Overview

State Water Board adopted the OWTS Policy on June 19, 2012 in response to legislative direction in the Water Code. The Policy grants a Conditional Waiver of the need to submit a report of waste discharge, obtain waste discharge requirements, and pay annual fees for discharges covered under the policy. Not all septic system discharges are covered, as further described below. The Waiver applies to all existing and new septic systems and will be renewed every five years by the State Water Board. The OWTS policy establishes a number of milestone dates for local agencies to submit information and for the State and Regional Water Boards to take actions. It establishes five tiers as follows.

- Tier 0 (Existing Systems),

- Tier 1 (Statewide Requirements for Low Risk New or Replacement systems, unless a Tier 2 is approved),
- Tier 2 (Local Agency Management Programs, or LAMPS, for Low Risk New or Replacement systems),
- Tier 3 (Advanced Protection Management Program for surface water bodies affected with pathogens or nutrients), and
- Tier 4 – (OWTS Requiring Corrective Action, or failing systems).

III. B. OWTS Policy Milestones

The OWTS Policy became effective on May 13, 2015 and contains a number of time schedules and elements. By May 13, 2018, all local agencies approving septic systems must implement Tier 1 statewide requirements or, with Water Board approval, implement a Tier 2 LAMP with prescriptive programs that incorporate periodic water quality assessment evaluations. The important policy milestones are described in Table 6.

Table 6 – OWTS Policy Milestone Dates

Milestone	Requirement
June 19, 2012	OWTS Policy Adopted.
May 13, 2013	OWTS Policy Effective.
May 13, 2014	Basin Plan Alignment. Region 6 incorporated the OWTS Policy by reference in the Basin Plan.
May 13, 2016	Local agencies submit programs called Local Agency Management Plans (LAMPs) further discussed below.
May 13, 2017	Regional Boards approve LAMPs further discussed below. This is the next major milestone relevant to the board.
May 13, 2018	Existing Basin Plan requirements remain in effect until this date upon which septic tank criteria are superseded by a LAMP or the OWTS Policy, Tier 1 further discussed below. State Board renews the Waiver of existing septic systems contained in the OWTS Policy.

- *The OWTS policy does not define the method or manner of LAMP approval, which is left to each Regional Board. Staff recommends that LAMPs be approved through board resolution for local agencies for which Region 6 is lead.*

III. C. OWTS Not Subject to the Policy

The following OWTS are subject to policy requirements and are required to submit a report of waste discharge to the Water Board. A future Water Board task is to identify these facilities and request applications be submitted.

- Any OWTS with flows greater than 10,000 gal/day. Staff does not know the number or locations of these systems that would include schools, mobile home parks, campgrounds, etc.
- Any OWTS that receives high-strength wastewater which is a 30-day average biochemical oxygen demand (BOD) greater than 300 mg/L, total suspended solids (TSS) greater than 330 mg/L, or fats, oils, and grease (FOG) greater than 100 mg/L.
- Any OWTS from a commercial food services receiving high-strength wastewater with a BOD higher than 900 mg/L or a non-functioning oil/grease interceptor.

  - *The number of OWTS in these categories requiring Water Board regulation is unknown, but includes numerous schools, camps, mobile home parks and recreational vehicle parks previously permitted by the local agency and not the Water Board.*

The OWTS Policy allows Regional Water Boards to separately regulate any system under individual waste discharge requirements.

III. D. OWTS Policy Tiers

The OWTS Policy establishes a statewide, risk-based, tiered approach for regulation and management of OWTS installations and replacements as described in Table 7. All local agencies must annually report to the Water Board regarding complaints, system cleaning and system permits issued.

Table 7. OWTS Policy Tier Description

Tier	Requirement
Tier 0 Existing Systems	Applies to properly functioning existing systems unless the system is not subject to the policy as discussed below, do not require corrective action and are not near an impaired water body. For these systems, the OWTS Policy waives the requirement to submit a report of waste discharge, obtain waste discharge requirements and pay annual fees.
Tier 1 Statewide Criteria	These statewide standards apply to all new and replacement systems after May 13, 2018, <u>unless</u> a LAMP is approved. Systems must meet minimum criteria for soil types, percolation rates, setbacks, ground slope, density, construction and installation. • *Tier 1 has no minimum density for existing subdivided lots. Allowable densities for lots subdivided after May 13, 2013, must meet the following average density. This table has caused many local agencies in Region 6 to propose a LAMP because Tier 1 requires larger lots than local agencies currently require.*

<table>
<tr><th>Tier</th><th>Requirement</th></tr>
<tr><td></td><td>
<table>
<tr><th>Avg. Annual Rainfall (in/yr.)</th><th>Allowable Density (acres/single family dwelling unit)</th></tr>
<tr><td>0 - 15</td><td>2.5</td></tr>
<tr><td>>15 - 20</td><td>2</td></tr>
<tr><td>>20 - 25</td><td>1.5</td></tr>
<tr><td>>25 – 35</td><td>1</td></tr>
<tr><td>>35 – 40</td><td>0.75</td></tr>
<tr><td>>40</td><td>0.5</td></tr>
</table>

Local agencies covered under Tier 1 may approve new or replacement systems with flows no larger than 3,200 gal/day. Proposed systems with larger flows within Tier 1 local agency jurisdictions would be referred to the Regional Board for approval.

➢ Within Region 6, the City of Barstow and City of Victorville have indicated intent to use Tier 1 criteria.
</td></tr>
<tr><td>Tier 2
Local Agency Management Plan</td><td>Local agencies may submit a LAMP for Regional Board approval. LAMPS may include standards different than Tier 1. An approved LAMP supersedes Tier 1 criteria for that jurisdiction only. The LAMP must define the maximum authorized project flow and criteria for system site evaluation, siting, design and construction. A LAMP must describe a number of elements including, but not limited to, the following.
• Inspection and maintenance requirements.
• Criteria for systems near impaired water bodies.
• Certification and training requirements for service providers.
• Consideration of onsite system maintenance districts.
• Consideration of Regional Salt and Nutrient Management Plans.
Local agencies with an approved LAMP must maintain a <u>Water Quality Assessment Program</u> to evaluate the impact of OWTS discharges and assess the extent to which groundwater and surface water may be adversely impacted. The program must include <u>monitoring and analysis of water quality data</u> and evaluation of overall performance such as failures etc. <u>Annual reports are required by February 1</u> each year and every fifth year an evaluation of the program and assessment of whether water quality is impacted.
Some items are not allowed in a LAMP. These include, but</td></tr>
</table>

Tier	Requirement
	are not limited to, the following. • Cesspools. • OWTS with flows greater than 10,000 gal/day. • Above ground effluent disposal. • OWTS systems receiving RV waste.
Tier 3 Impaired Water Bodies	Advanced protection is required for systems near water bodies impaired with pathogens or nutrients. ➢ *Currently, Region 6 has not currently identified any surface water bodies as impaired due to OWTS.*
Tier 4 Corrective Systems	Failed systems, such as having surfacing effluent in the disposal system, must be brought into compliance with Tier 1 or Tier 2.

III. E. Regional Board Lead for LAMP Approval

A map showing the location of counties, in whole or in part, that are in the Lahontan Region is presented in Figure 2. The map also shows cities and town locations that will have a LAMP.

The Water Board is the lead approval agency for the following LAMPS.

Local Agency	Draft LAMP Received, 2016	Staff Comments Sent	Other Regional Boards
Alpine County			
Inyo County	May 12, 2016		
Lassen County			R5
Mono County	May 18, 2016		
San Bernardino County	October 30, 2015	June 23, 2016	R7, R8
Adelanto, City	May 26, 2015		
Apple Valley, Town of	May 13, 2016		
California City	July 19, 2016		
Hesperia, City	May 13, 2016		

The following LAMPs are partially in Region 6, but other Regional Boards are the lead approval agency.

Local Agency	Draft LAMP Received	Staff Comments Sent	Other Regional Boards

Local Agency	Draft LAMP Received	Staff Comments Sent	Other Regional Boards
El Dorado	April 21, 2016	May 10, 2016	R5-lead
Kern	May 23, 2016	August 8, 2016	R3, R4, R5-lead
Los Angeles			R4-lead
Modoc	June 2, 2016	July 8, 2016	R1, R5-lead
Nevada County	June 2, 2016		R6, R5- Lead
Placer			R5-lead
Sierra			R5-lead

IV. LAMP Deficiencies

Water Board staff has reviewed the draft LAMPs and has found that each LAMP has deficiencies. The deficiencies that are common to the LAMPs are the following:

1. Insufficient Water Quality Assessment Program (WQAP).
2. Density requirements different from Basin Plan and/or new Tier 1 density requirements. No determination of how proposed density criteria will protect water quality.
3. Local agencies do not adequately describe permitting program for Supplemental Treatment Systems (STS) and are not aware that referrals for larger systems or STS require a report of waste discharge be submitted to Water Board.
4. No funding or resources to conduct WQAP or implement other elements of LAMP. No identification of person responsible for monitoring and inspections of OWTS and preparing reports for Water Board.

Each deficiency is discussed in further detail below.

1. Insufficient WQAP

The minimum level of the Water Quality Assessment Program is open-ended. Most local agencies do not have budget for water quality monitoring programs. All local agency programs were historically prescriptive-based, meaning that approvals were granted based on meeting certain criteria. A LAMP essentially requires local agencies to assess water quality and implement a performance monitoring program for each STS

The purpose of the WQAP is to “evaluate the impact of OWTS discharges, and assess the extent to which groundwater and local surface water quality may be adversely impacted.” Based on this objective, the WQAP at a minimum, may have its primary focus be in those areas that have the greatest potential impact to groundwater. In the South Lahontan region, these areas include monitoring nitrate and salt increases in groundwater basins at the lower slopes of the San Bernardino and San Gabriel Mountains; e.g. Antelope Valley and Mojave

groundwater basins. Each local agency should identify water bodies and specific areas of highest risk to drinking water supplies.

Water Board staff identifies two categories of groundwater well data. These are 1) existing supply and monitoring wells, and 2) dedicated groundwater detection monitoring wells.

For the first category, current water quality data can be uploaded to GeoTracker, a publically available web-based database. For many of the Water Board's regulated facilities or sites undergoing investigation or cleanup, monitoring well water quality information is stored in GeoTracker. For supply wells, the Division of Drinking Water collects water quality data from community water supplies. The task to load and update this data is in progress. Local agencies have the ability to access GeoTracker to obtain the latest groundwater data for a specific area. Additionally, local agencies can review GeoTracker to identify and locate existing monitoring wells and/or supply wells that may be located in areas that would adequately represent potential cumulative effects from septic systems. These wells may not now be sampled for nitrates or salts, but with some coordination and support from the local agency, and could become part of a LAMP WQAP.

The disadvantage of supply well water quality data is that these wells have long screened intervals and the water quality of the sample collected is represented by the column of water between the lower depth of the screen interval and the depth to water. When nitrate reaches groundwater from septic systems, it typically stays near the top of the water table or aquifer and is not well-mixed within the aquifer and therefore would be diluted in a supply well sample.

In the second category, the local agency would install strategically placed (to focus on groundwater areas of greatest risk to water quality) monitoring wells, where the screened interval may be the top 20 ft. of the groundwater zone. The local agency would monitor these wells on a periodic basis to assess water quality trends, primarily nitrate and salts. If and when adverse water quality impacts are being observed, the local agency will respond by evaluating alternatives to standard OWTS in the area including use of alternative individual systems with nitrate removal capability or community wastewater collection and treatment. The disadvantage with detection monitoring wells is that no funding is available.

2. Density requirements different from Basin Plan density requirements

The Basin Plan density requirements prior to the OWTS Policy are the following:

- Use of septic systems for single family homes on lots subdivided after 1988 may have a gross density of no greater than two (2) single family equivalent dwelling units per acre. Equivalent dwelling units (EDUs) are defined as 250 gallons per day per EDU.

- Use of new septic systems is permitted on lots subdivided prior to June 16, 1988 if the lot sizes has a net area greater than or equal to 15,000 ft².

The local agencies have proposed densities that differ from the Basin Plan density criteria. The proposed densities may be less restrictive or more restrictive than the Basin Plan. The density differences of reviewed LAMPs, expressed as minimum lot size, are presented for South Lahontan Region in Table 8 and North Lahontan Region in Table 9.

Each county in the South Lahontan regions proposes density criteria that differ from the Basin Plan density criteria and none proposed are as protective as Tier 1 in the new OWTS policy.

However, once the Water Board has accepted a LAMP and after May 13, 2018, the rules for density criteria will be specified by the LAMP and not the Basin Plan, nor the Tier 1 density requirements of the OWTS Policy. Water Board must evaluate proposals that are less restrictive than the Basin Plan and Tier 1 of the OWTS Policy and determine if the proposal provides sufficient water quality protection.

Table 8. LAMP Maximum Densities, South Lahontan Counties and Cities*

Agency	Minimum ½ acre for new development	Minimum lot size of 15,000 ft² in subdivision approved before Aug 17, 1987	Other minimum parcel size	EDU, gallons per day
San Bernardino County	Yes	No	– –	300[1]
Adelanto, Apple Valley, and Hesperia	Yes	Yes[2]	– –	250
Inyo and Mono Counties	Yes	No	– –	250
Kern County	No	No	Varies[3]	270

California City	Yes	No	– –	
Los Angeles	Yes	No	Tier 1 Table 1	(Not specified)

*Values are based on draft LAMPs. Final LAMPs may have different values.
[1]Parts of San Bernardino County are located in Region 7 and Region 8. These two regions allow 300 gal/day/EDU.
[2]In these cities, the 15,000 ft² lot size applies regardless of the subdivision approval date. The difference between 15,000 ft² lot sizes and the ½ acre lots size may be minimal, because the 15,000 ft² lot size is the size of the parcel, whereas the ½ acre density applies to lots in a subdivision, which includes roads.
[3]In Kern County, minimum parcel size is based on factors including areas of private wells, density of septic systems in a given area, and sensitivity to beneficial uses of water resources in a given area. Minimum parcel sizes range from 7200 ft² to 2½.

Table 9. LAMP Maximum Densities, North Lahontan Counties*

County	Alpine	El Dorado	Lassen	Modoc	Nevada	Placer	Sierra
Density	½ to 2[1]	1	1	1	(none)[2]	(none)[2]	(none)

*Values are based on draft LAMPs or best available information as of August 24, 2016. Final LAMP may have different values. Most counties do not propose to continue with the ½ minimum parcel size for new development, and none of the counties proposed to continue with the 15,000 ft² minimum lot size in pre-1988 subdivision.
[1]Maximum density is 2 acres for a private drinking water well and ½ acre for drinking water served from a community/municipal water system.
[2]Set back requirements result in parcel sizes that are seldom less than ½ acre.

3. Local agencies do not adequately describe permitting program for Supplemental Treatment Systems (STS) and are not aware that referrals for larger systems or STS require a report of waste discharge be submitted to Water Board.

   Over the years, local agencies have referred many septic system proposals to the Water Board. Staff would review designs and recommend concurrence. In recent years, most referrals fall into one of the following categories:

   - Proposal includes a Supplemental Treatment System.

- Proposal includes a non-conventional dispersal system, such as a mound system.
- Proposal does not meet density criteria.
- Proposal does not meet slope conditions.
- Proposal does not meet set back requirements to a surface water or some other feature.

The Water Board cannot approve the proposed system, because this approval would constitute specifying the manner or method of compliance. Water Board can, however, make recommendations to the local agency such that the proposed supplemental treatment system is acceptable. The recommendation could also include the desired effluent limitation, monitoring, inspections, and reporting from the owner.

If the local agency chooses not to include supplemental treatment systems within their LAMP scope, the owners of referred proposed systems must submit a report of waste discharge, obtain waste discharge requirements, and pay annual fees, unless the LAMP specifically outlines how these systems and circumstances will be addressed and what performance monitoring will be required.

4. No funding or resources to implement LAMP and conduct WQAP.

The Policy requires that someone must monitor and inspect septic systems with STS. San Bernardino County proposes to refer all septic systems with STS to the Water Board. In this case, the Water Board would require monitoring and inspection of STS septic system through waste discharge requirements.

n the Adelanto, Apple Valley, and Hesperia proposed LAMPs, the agencies proposed a program to issue annual operating permits to septic systems with STS. However, these local agencies do not provide any details on the management of the annual permit program or whether they will require monitoring and reporting. In addition, the local agency will need to enact an ordinance that gives them authority to regulate operation of STS septic systems.

Kern County requires an operating permit for all alternative septic systems, which include STS and alternative dispersal systems. The operating permit requires monitoring and reporting.

To conduct a WQAP, the local agency needs funding and resources. The employees that work for the local agencies are Registered Environmental Health Specialists (REHS). These individuals are not trained, and their job description does not include, tasks to produce a WQAP, including assessment program design, data collection, data interpretation, conclusions and recommendations. Therefore, a local agency may need to hire other staff or contract the work to a qualified professional firm Because WQAP is a OWTS Policy requirement, local

agencies need to seek funding to manage a WQAP, such as increased septic system permit fees.

V. Summary

In summary, the local agency management plans require additional details and water quality evaluation before they are ready for Water Board consideration. Water Board staff will supply written comments and recommendations on the identified LAMP deficiencies to each of the local agencies. Water Board staff intend to meet with local agencies to share existing water quality information for their area and identify options to coordinate and collaborate with others to obtain water quality information in the future to adequately assess future water quality impacts from continued and increased use of OWTS in the Lahontan Region. Before the Water Board considers accepting any of the LAMPs, especially the density limits that are so far from meeting the new Tier 1 requirements, the local agencies with assistance from the Water Board and other entities gathering water quality information need to make findings that water quality is not currently being adversely impacted and that water pollution is not being threatened from ongoing and increased use of OWTS under any of the density proposals that at a minimum meet the Lahontan Basin Plan density criteria. Discussions also need to evaluate a local agency's willingness to require water quality assessment and reporting by individual or communities. Finally, Water Board needs to encourage and support local agencies to seek and evaluate funding options.

VI. Recommendations

Local agencies must develop and implement WQAP targeted at high risk areas where high density OWTS exist, are planned, or where other factors contribute to likely ground water or surface water degradation now or in the future. The local agencies must identify these areas in the LAMP.

Staff recommends that local agencies consider incorporating Tier 1 density criteria or providing another basis and justification for less restrictive density criteria for new OWTS that is protective of water quality.

Water Board staff encourage local agencies propose to manage monitoring and inspections for OWTS with supplemental treatment systems (STS). This could be accomplished through an operating permit program, or as a minimum, require the owner to pay for independent inspection and maintenance and submit reports to the local agency. The local agency should be discouraged from referring these systems to the Water Board for waste discharge requirements, because this would involve delays, overly burdensome permitting and annual fees to the Water Board.

VII. References

1. California State Water Resources Control Board, 2012, Resolution 2012-0032 http://www.waterboards.ca.gov/water_issues/programs/owts/docs/rs2012_0032.pdf

2. California State Water Resources Control Board, 2012, *Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems* http://www.waterboards.ca.gov/water_issues/programs/owts/docs/owts_policy.pdf

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4. U.S. Environmental Protection Agency, 2002, *Onsite Wastewater Treatment Systems Manual*, EPA/625/R-00/008.

5. Izbicki, Flint et al, 2015, Storage and mobilization of natural and septic nitrate in thick unsaturated zones, California, *Journal of Hydrology*, 524 (2015) 147-165

6. California Regional Water Quality Control Board Lahontan Region, 2015, *Water Quality Control Plan for the Lahontan Region* http://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/references.shtml

7. Kennedy/Jenks Consultants and Todd Groundwater, December 2015, *Mojave Salt and Nutrient Management Plan*

8. Izzo, Victor J., May 1987, *Staff Report on Septic Tanks in the Victor Valley*, California Regional Water Quality Control Board Lahontan Region

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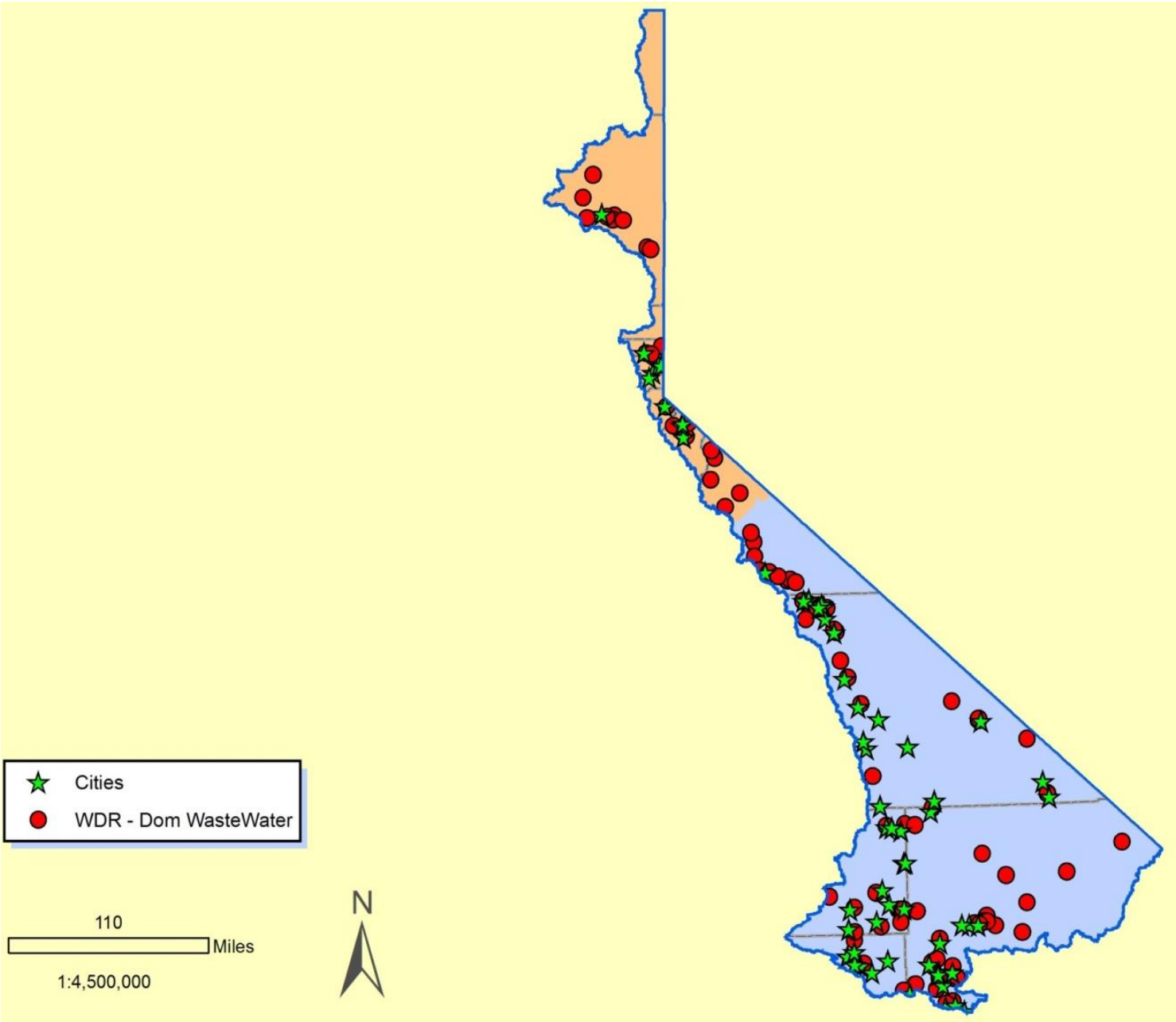

Figure 1: Waste discharge requirements for domestic wastewater treatment plants.

*http://www.spl.usace.army.mil/Missions/Regulatory/FinalRegulatoryActions.aspx

Figure 2. Regional Board's designated to approve LAMPS.

ENCLOSURE 2

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California Water Boards

Fact Sheet

STATE WATER RESOURCES CONTROL BOARD | 1001 I Street, Sacramento, CA 95814 | Mailing Address: P. O. Box 100, Sacramento, CA 95812-0100 | www.waterboards.ca.gov

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

General OWTS Policy Information

What are we regulating?

- Onsite wastewater treatment systems (OWTS) commonly known as septic systems that primarily treat domestic wastewater and employ subsurface disposal.
- There are an estimated 1.2 million OWTS in California

When does it take effect?

- The effective date of the Policy was May 13, 2013.
- Except for Tier 3, local agencies may continue to implement their existing OWTS permitting programs for 60 months after the effective date of the Policy.
- Owners of OWTS with projected flow over 10,000 gallons per day (gpd) or receives high-strength wastewater shall notify the Regional Water Boards. These OWTS may be required to submit a Report of Waste Discharge for coverage of Waste Discharge Requirements (WDR) or a Waiver of WDR.

Why was the Policy adopted?

- To allow continued use of OWTS, while protecting water quality and public health
- Assembly Bill 885 amended California Water Code section 13290, which required the State Water Board to develop statewide standards or regulations for permitting and operation of OWTS.

Who is impacted?

- OWTS owners
- Local agencies that permit OWTS (county environmental health dept., etc.)
- Regional Water Boards
- State Water Board

OWTS Policy Tiers

The OWTS Policy establishes a statewide, risk-based, tiered approach for regulation and management of OWTS installations and replacements, and recognizes the effectiveness of local permitting agencies. Tiers are briefly summarized below, refer to the OWTS Policy for a complete discussion of the requirements.

Tier 0: Existing OWTS (OWTS Policy Section 6)

- Applies to properly functioning systems that do not need corrective action and are not near an impaired water body subject to TMDL, local agency's special provisions, or located within 600 feet of a water body listed on OWTS Policy Attachment 2.
- Maximum flow rate is 10,000 gpd.

Tier 1: Low Risk New or Replacement OWTS (OWTS Policy Sections 7 & 8)

- Applies to new or replacement OWTS that comply with conservative siting and design standards described in the OWTS Policy.
- Tier 1 applies when a Local Agency Management Program (LAMP) has not been approved by the Regional Water Board.
- Maximum flow rate is 3,500 gpd.

Tier 2: Local Agency Management Program (LAMP) for New or Replacement OWTS (OWTS Policy Section 9)

- Applies to new or replacement OWTS that comply with the siting and design standards in an approved LAMP. LAMPs are developed by Local Agencies based on local conditions; siting and design standards may differ from Tier 1 standards.
- Maximum flow rate is 10,000 gpd.

Tier 3: Advanced Protection Management Program (OWTS Policy Section 10)

- Applies to OWTS located near impaired surface water bodies that are subject to a Total Maximum Daily Load (TMDL) implementation plan, a special provision contained in a LAMP, or is located within 600 feet of a water body listed on OWTS Attachment 2.
- Supplemental treatment requirements may apply to a Tier 3 system.
- Maximum flow rate is 10,000 gpd.

Tier 4: OWTS Requiring Corrective Action (OWTS Policy Section 11)

- Applies to systems that are not properly functioning (failing).
- Failure may be indicated by surfacing effluent, wastewater backing up in plumbing fixtures, OWTS component/piping structural failure, or significant groundwater or surface water degradation

The Policy and Substitute Environmental Document are available on the Internet at:
http://www.waterboards.ca.gov/water_issues/programs/owts/index.shtml

For more information please contact: Sherly Rosilela, P.E., Water Resource Control Engineer
Sherly.Rosilela@waterboards.ca.gov or (916)341-5578

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ENCLOSURE 3

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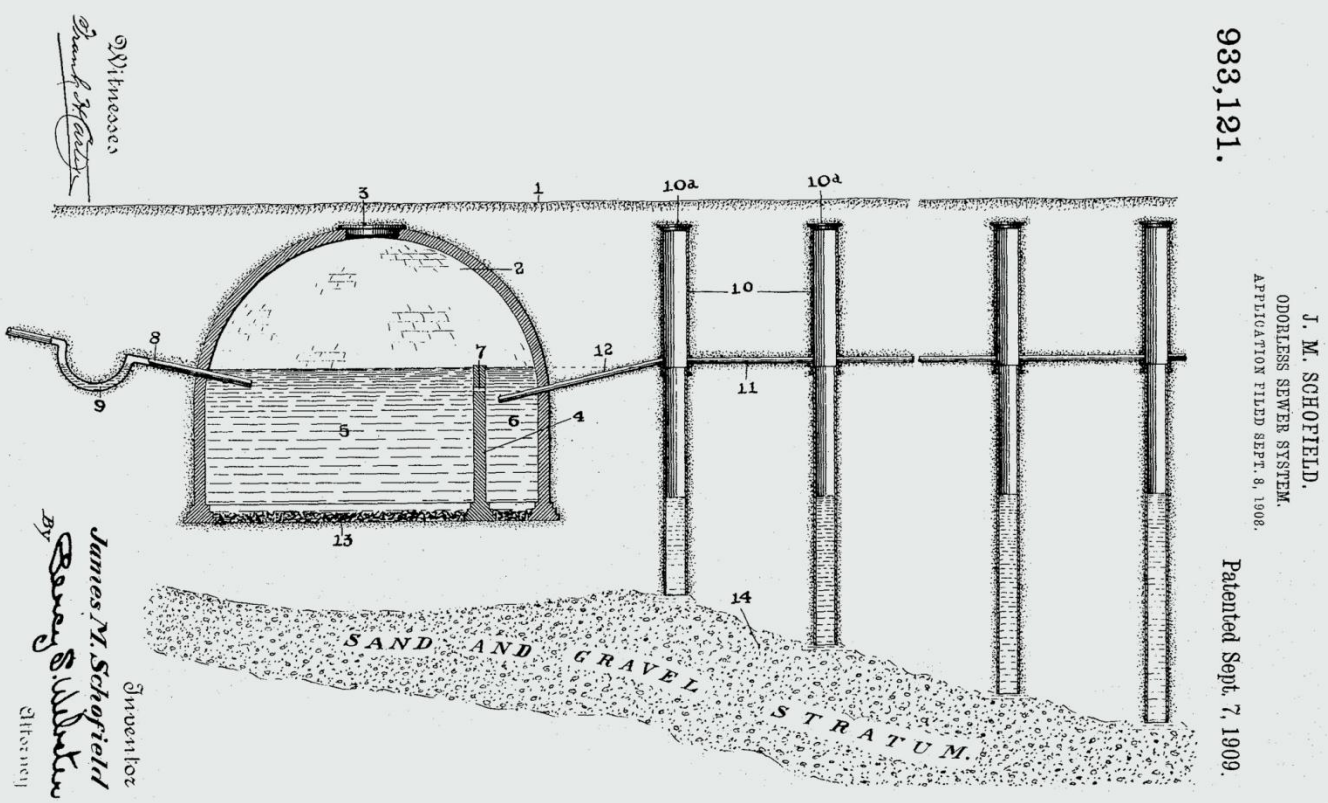


OWTS POLICY

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

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.

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.

Financial Assistance

14.0 Local Agencies may apply to the State Water Board for funds from the Clean Water State Revolving Fund for use in mini-loan programs that provide low interest loan assistance to private property owners with costs associated with complying with this Policy.

14.1 Loan interest rates for loans to local agencies will be set by the State Water Board using its policies, procedures, and strategies for implementing the Clean Water State Revolving Fund program, but will typically be one-half of the States most recent General Obligation bond sale. Historically interest rates have ranged between 2.0 and 3.0 percent.

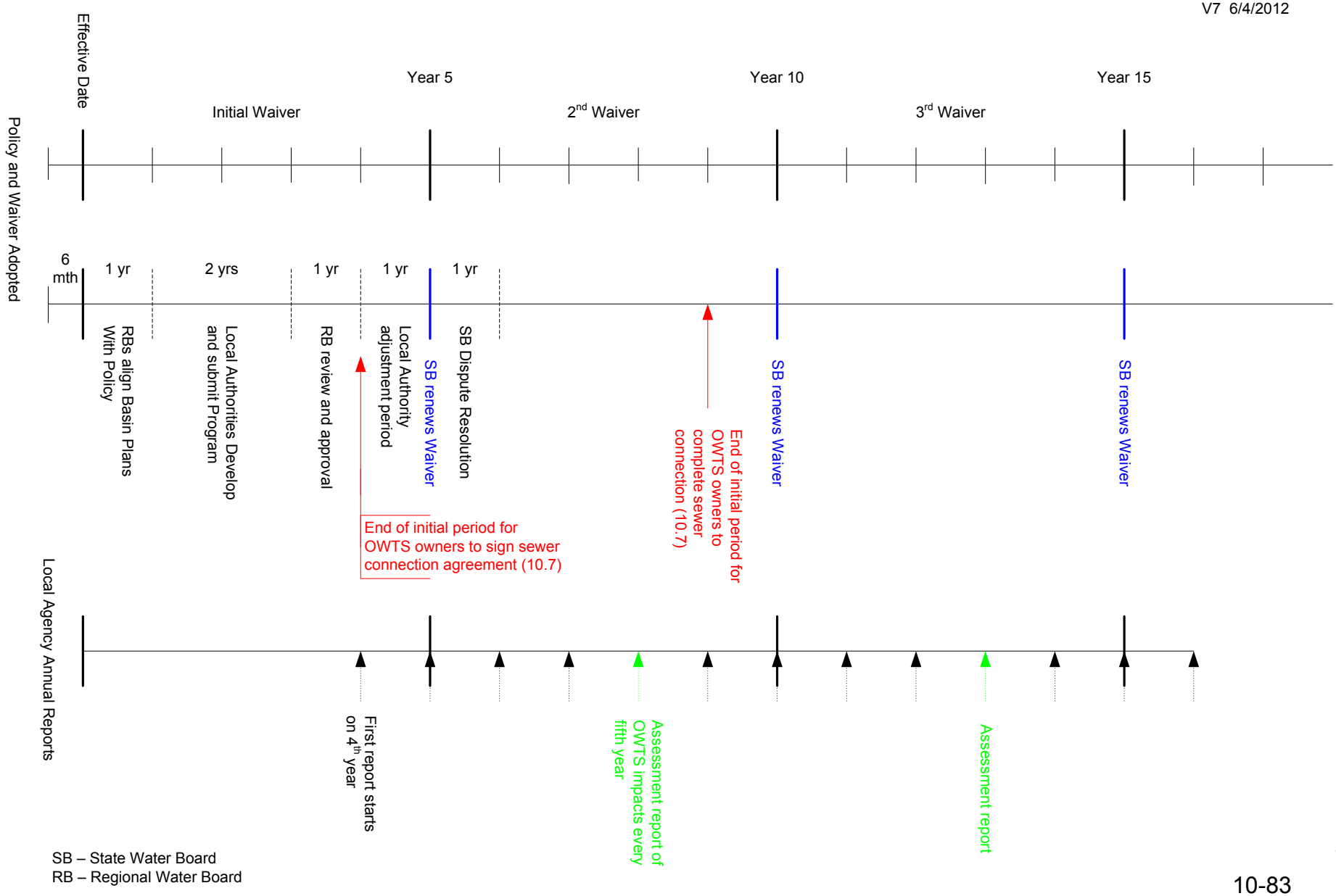
14.2 Local agencies may add additional interest points to their loans made to private entities to cover their costs of administering the mini-loan program.

14.3 Local agencies may submit their suggested loan eligibility criteria for the min-loan program they wish to establish to the State Water Board for approval, but should consider the legislative intent stated in Water Code Section 13291.5 is that assistance is encouraged for private property owners whose cost of complying with the requirements of this policy exceeds one-half of one percent of the current assessed value of the property on which the OWTS is located.

Attachment 1

OWTS Policy Time Lines

V7 6/4/2012



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

ENCLOSURE 4

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4.4 MUNICIPAL AND DOMESTIC WASTEWATER: TREATMENT, DISPOSAL, AND RECLAMATION

Municipal and domestic wastewater[1] discharges can cause chemical, bacteriological and toxic contamination to both ground and surface waters. Ground and/or surface water contamination can also occur from poor disposal practices, such as discharging wastes into unlined ponds, pits or sumps. Such waste discharges are regulated by the Regional Board or a designated agency with proper authority. Municipal wastewater, individual waste disposal systems, effluent limitations and policies under Regional Board authority are discussed below. Most of these requirements and policies are implemented through the Regional Board permitting process. However, some requirements may be implemented by local agencies. Methods used to determine compliance with limitations and requirements are further discussed in this Section.

Waste discharge prohibitions concerning sewage are listed in Section 4.1, "Waste Discharge Prohibitions." Effluent limitations and treatment policies concerning wastewater treatment and disposal are set forth below.

Effluent Limitations

Effluent limitations for disposal of treated point source wastes to surface waters are developed for individual point sources and included in waste discharge requirements or NPDES permits. They are numeric and narrative limits placed on the quality and quantity of the waste discharge or effluent. Effluent limitations are based on water quality objectives for the area of effluent disposal and applicable state and federal policies and effluent limits. Numeric and narrative water quality objectives and policies are based on beneficial uses established for the receiving waters.

Treatment process selection is discussed in general for wastewater discharges and more specifically for two types of disposal: surface water disposal and land disposal. Waste discharge prohibitions related to treated point source wastes also determine methods of treatment and disposal. Prohibitions concerning wastewater are contained in the Waste Discharge Prohibitions section, above. Treatment policies, including pretreatment, unlined sewage ponds, constructed wetlands, package treatment plants and wastewater reclamation, are discussed under "Treatment Policies" below.

In the past, federal water quality control programs for surface water protection emphasized a "technology-based" approach to regulation of waste disposal. The current emphasis is on "water quality based controls." States have been directed to identify "Water Quality Limited Segments," which are surface water bodies that are not attaining water quality objectives or protection of beneficial uses and are not expected to do so even with technology-based controls. For these waters, states must conduct point and nonpoint source wasteload allocations, and establish Total Maximum Daily Loads (TMDLs) of pollutants that can be permitted from each discharger to ensure attainment and maintenance of water quality objectives and protection of beneficial uses. TMDLs are used, together with a margin of safety, to set effluent limitations in discharge permits. Additions to and deletions from the Lahontan Region's list of Water Quality Limited Segments are considered every two years as part of the water quality assessment process (Chapter 7). Priorities for developing TMDLs for listed waters are also updated through this process. Section 4.13 of this Basin Plan includes approved TMDLs for specific surface waters.

Because the Lahontan Region has many high quality water bodies where state and federal antidegradation policies and regulations apply, effluent limitations are set to prevent degradation of water quality. Special considerations in effluent limitations for particular treatment plants (such as the Tahoe-Truckee Sanitation Agency) are discussed in the "Facilities Discussion" below.

General Requirements

Discharge requirements are prescribed for each discharger on a case-by-case basis; however, in every case, industrial and municipal effluent

[1] **Note:** "Municipal and domestic wastewater" is defined as sewage or a mixture of predominantly sewage and other waste from districts, municipalities, communities, hospitals, schools, and publicly or privately owned wastewater systems.

discharged to waters of the Region shall contain essentially none of the following substances:

- Chlorinated hydrocarbons
- Toxic substances
- Harmful substances that may bioconcentrate or bioaccumulate
- Excessive heat
- Radioactive substances
- Grease, oil, and phenolic compounds
- Excessively acidic and basic substances
- Heavy metals such as lead, copper, zinc, mercury, etc.
- Other deleterious substances

Furthermore, any person who is discharging or proposes to discharge waste, other than into a community sewer system, must file a Report of Waste Discharge (RWD) with the Regional Board unless this requirement is waived by the Regional Board. Upon receipt of the RWD, the Regional Board, with information and comments received from state agencies and the public, will prescribe discharge requirements including any appropriate limitations on biological and mineral constituents, as well as toxic or other deleterious substances. Additionally, revised waste discharge reports may be required prior to additions of waste, changes in treatment methods, changes in disposal area or increases in effluent flow.

Discharge requirements will be established that are consistent with the water quality objectives for the receiving water (see Chapter 3 of this Plan), including wasteload allocations or Total Maximum Daily Loads (TMDLs) established for the discharge, the State Board's "antidegradation" policy, the federal antidegradation and anti-backsliding regulations, and the principle of obtaining the optimum beneficial use of the Basin's water resources.

Land Disposal of Sewage Effluent

Land disposal of sewage effluent is conditionally exempt from the land disposal requirements contained in the California Code of Regulations, Title 27 (see section 20090). Land disposal of sewage effluent includes disposal to evaporation-percolation basins, irrigation of land, disposal to constructed wetlands, drying ponds or beds for municipal effluent sludge, and disposal to lined evaporation ponds.

Principal factors affecting treatment process selection for land disposal are the nature of soils and groundwaters in the disposal areas and, where irrigation is involved, the nature of crops (see Wastewater Reclamation Policy and Recycled Water Policy). Wastewater characteristics of particular concern are total salt content, nitrate, boron, pathogenic organisms, and toxic chemicals. Where percolation alone is considered, the nature of underlying groundwaters is of particular concern. Treatment processes should be tailored to ensure that local groundwaters are not unreasonably degraded. U.S. Environmental Protection Agency (USEPA) guidelines for secondary treatment (based on the federal Clean Water Act, Section 301) do not apply to land disposal cases. However, municipal treatment facilities must provide effective solids removal and some soluble organics removal for percolation bed operations and for reduction of nuisance in wastewater effluent irrigation operations. Disinfection requirements are dictated by the disposal method. Oxidation ponds may be cost-effective in some remote locations and may be equivalent to secondary treatment. The exact constituents and limitations must be established on a case-by-case basis. Nitrate removal is required in some cases where percolating waste may impact beneficial uses of groundwater due to increased nitrate levels. Percolation basins operated in alternating wet and dry cycles may provide significant nitrogen removal through nitrification/denitrification processes in the soil column. Finer textured soils are more effective in removing nitrogen than coarse soils. Monitoring in the immediate vicinity of the disposal site may be required in either case. Where the need for nitrate removal is not clear, removal could be considered at a possible future stage depending on monitoring results.

The closed hydrologic systems of the Lahontan Region allow the accumulation of minerals in groundwater. Therefore, discharge requirements for wastewater may generally specify a maximum limit for mineral constituents in order to meet the water quality objectives established for the receiving groundwater. In areas where insufficient data preclude the establishment of objectives, and as an interim measure until such data are available, effluent limits may specify a reasonable incremental increase for constituents above the level contained in the underlying groundwater. These limits may be superseded by more stringent requirements where necessary for effective water quality management of the receiving water. In all cases, groundwaters of the Region are specified as a source of drinking water unless the Regional Board has granted an exemption in accordance with the Sources of Drinking Water Policy (see Chapter 6, Plans and Policies). Therefore, effluent discharged to land must not adversely impact an underlying aquifer that is a designated drinking water supply, except

as allowed by the Regional Board pursuant to the State Board's antidegradation policy, Resolution 68-16.

Surface Water Disposal of Sewage Effluent

The general purpose of sewage treatment is to provide a stable effluent that can be disposed of without hazard or actual damage to the environment, that will commingle with and remain a part of the usable water supply, and that will not impair the quality of the receiving water for present and probable future beneficial uses. Surface water disposal is prohibited in some watersheds; see Sections 4.1 and 5.2, Waste Discharge Prohibitions.

Primary factors governing treatment process selection for disposal to surface waters are federal and state effluent limits, state public health regulations, and water quality objectives for beneficial use protection. At a minimum, discharges of sewage to surface waters shall meet effluent limitations in accordance with the USEPA standards for secondary treatment as presently established for the particular method of treatment. The current USEPA standards for minimum level of effluent quality attainable by secondary treatment (40 CFR § 133.102) are as follows:

Constituent[1]	30-Day Arithmetic Mean	7-Day Arithmetic Mean
20°C BOD_5 (mg/L)	30	45
Suspended Solids (mg/L)	30	45

pH: The effluent values for pH shall remain within the limits of 6.0 to 9.0

Where water contact recreational use is to be protected, the California Department of Public Health (DPH) requires coagulation, filtration, and disinfection providing a median coliform Most Probable Number (MPN) of 2.2/100 ml or less in receiving waters. Detoxification is required where fishery protection is a concern. Detoxification would include effluent limits for identified toxicants, pursuant to Section 307 of the Clean Water Act. Source control of specific toxicants may be necessary to comply with the Act. Acute and/or chronic biological toxicity testing is required to ensure compliance with all applicable state and federal toxicity standards. Additional effluent limitations and waste discharge prohibitions may be specified in accordance with appropriate plans or policies of the State or Regional Boards (see Chapter 6, Plans and Policies).

Septage and Sludge Disposal

Septage is generated from the use of holding tanks and septic tanks (see discussion of "Onsite Wastewater Treatment Systems" later in this section). Sludge is the semi-solid material which settles out or is filtered out of sewage or water during the wastewater or drinking water treatment process. Septage and sludge may contain any substance that may be poured down a drain or flushed down a toilet. Metals, acids, alkalies, and pesticides may be present in small quantities. High levels of ammonia, coliforms, and BOD will almost certainly be found. Wastewater treatment sludge will also contain any substances used by the treatment plant to cause the solids to settle out of the liquid wastewater during the treatment process. Drinking water treatment sludge may have low levels of substances found in wastewater treatment sludge. Because of the concentrated nature of any percolate from sludge and septage, any percolate to ground or surface waters can seriously impact beneficial uses. Since municipal wastewater sludge is considered solid waste, disposal is regulated under Title 27. Sewage sludge, also known as biosolids, are also regulated under federal law (Code of Federal Regulations, Title 40, Part 503).

Septage is generated from numerous sources including residential septic tanks, holding tanks for recreational vehicle waste dumping, marina and individual vessel holding tanks, and commercial and industrial septic tanks. Because of the various sources, the quality of septage is also highly variable. It is desirable to have septage pumped and transported to either lined evaporation ponds or a sewage treatment plant where treatment of septage can be accomplished rather than direct disposal to a lined impoundment. Treatment of such concentrated waste, however, poses a problem for many smaller or at-capacity wastewater treatment plants in the Region. Not all wastewater treatment plants in the Lahontan Region accept septage from waste haulers who pump out septic tanks and holding tanks. The Regional Board will encourage that local officials review all proposals for new holding tanks or septic tanks to ensure that adequate septage disposal capacity is available. If necessary, the Regional Board will consider making

[1] **Note:** The arithmetic mean of the values for effluent samples collected for 20°C BOD_5 and Suspended Solids in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period (85 percent removal).

adequate septage disposal a condition of permitting new holding tanks or septic tanks. Proposals for new holding tanks or septic tanks that may be accepting industrial waste or chemical toilet wastes should be reviewed carefully by local agencies and Regional Board staff to ensure that proper treatment and final disposal of the septage generated can be accomplished without detriment to water quality. If septage is not commingled with wastewater for treatment at an approved wastewater treatment facility, septage must be placed in a Class II surface impoundment (lined containment structure, preventing the septage from contacting either surface or groundwater) (see California Code of Regulations, Title 27, Division 2, "Solid Waste").

The Regional Board specifically prohibits the unauthorized discharge of waste, including from boats and marinas, to surface waters (see "Waste Discharge Prohibitions"). Floating latrines are one possible way of reducing discharges of sewage from boats into lakes. Floating latrines will generally be of benefit, however, only for lakes that are so large that boaters in mid-lake find it inconvenient to return to shore to make use of on-shore facilities. Proposals for installation of floating latrines will be reviewed by the Regional Board on a case-by-case basis. Floating latrines should be vandalism-proof, and good maintenance agreements will be required. Boater surveys are recommended prior to installation, to verify that such facilities will actually be used by boaters.

Treatment Policies

Pretreatment Policy

It is the responsibility of the State and Regional Boards to implement and administer the federal Pretreatment Program for controlling the discharge of toxic and hazardous pollutants by industrial users into publicly-owned treatment works (POTWs) with capacity of 5 million gallons per day (mgd) or greater and for facilities under 5 mgd when industrial users could discharge toxic constituents that pass through or interfere with the facility. The Pretreatment Program is typically administered through the National Pollutant Discharge Elimination System (NPDES), although it may be administered through Waste Discharge Requirements for facilities that discharge to land. The Pretreatment Program is administered by the State through a Memorandum of Agreement (MOA) between the USEPA and the State Board. Regional Board responsibilities are summarized below.

- Enforce national pretreatment standards prohibiting discharges (40 CFR § 403.5).
- Enforce national categorical pretreatment standards (40 CFR, Subchapter N, Effluent Guidelines and Standards).
- Review, approve or deny POTW pretreatment programs (40 CFR § 403.8, 403.9 and 403.11).
- Require POTWs to develop and enforce local discharge limits [40 CFR § 403.5(c)].
- Oversee POTW pretreatment programs to ensure compliance with 40 CFR § 403.8, and with other pretreatment requirements in the POTW's waste discharge permits or NPDES permit.
- Perform POTW audits, compliance inspections, and review of quarterly and annual reports to assure POTW compliance with pretreatment requirements.
- Provide the State Board and USEPA, upon request, with copies of all notices received from POTWs that relate to new or changed introduction of pollutants to the POTW or other pertinent information.
- Review and approve POTW requests for authority to modify categorical pretreatment standards to reflect removal of pollutants by a POTW (40 CFR § 403.7, 403.9 and 403.11).
- Apply all other pretreatment requirements as required by 40 CFR Part 403.

Few municipal wastewater treatment plants in the Lahontan Region are large enough (greater than 5 mgd) to require pretreatment of commercial and industrial wastewater under the federal regulations. However, there is increasing concern for all wastewater facilities regarding the impacts of not only industrial, but also household chemicals on effluent quality.

Unlined Sewage Ponds

There are numerous unlined sewage ponds throughout the Region that are believed to be a threat to groundwater quality because they allow the percolation of inadequately treated sewage to underlying groundwater. Some of these facilities are owned by either private parties or small public entities that have very limited financial resources.

There is typically no groundwater monitoring associated with these small facilities, so their actual impact on groundwater is unknown. To require that all of these facilities be immediately upgraded to where they produce a secondary level effluent

would create, in most cases, a significant financial burden to the owners of the ponds. Such an approach may also result in upgraded facilities that are not needed to protect groundwater quality. Although it can also be expensive, groundwater monitoring at most of these facilities is needed to determine whether they are degrading the groundwater. If it is determined that the discharge from an unlined pond is impacting groundwater, action will be taken to require either elimination or improved treatment of the wastewater discharge. The requirement for upgrading treatment (or elimination of the discharge by placing it in a lined evaporation pond) should be made with provisions allowing for the improvements to be made within two years.

Recommended Control Actions to Address Unlined Sewage Ponds

1. Inventory all unlined ponds in the Region that are receiving sewage that has not received at least secondary-level treatment.

2. Prioritize the ponds by their threat to water quality, taking into account factors such as: (a) the volume of waste discharged, (b) the quality and existing beneficial uses of the receiving waters and (c) the likelihood of the sewage containing any industrial wastes.

3. Beginning with the highest priority facilities, revise waste discharge requirements to require the installation of at least three groundwater monitoring wells within two years.

4. If degradation of the groundwater is detected at any time after the first two years of semi-annual groundwater monitoring, waste discharge requirements will be revised to require that treatment of the discharge be upgraded to a secondary level or that the ponds be lined within two years. If no degradation (either actual or predicted violations of water quality objectives) is detected, the discharge will be allowed to continue with ongoing sampling of the groundwater monitoring wells.

   An exemption to the groundwater monitoring well requirement may be obtained if the discharger submits evidence that demonstrates to the satisfaction of the Regional Board's Executive Officer that the underlying groundwater will not be unreasonably affected or impermissibly degraded by any discharge from the pond.

Solar Biosolids Dewatering Beds

Some municipal treatment agencies that separate biosolids in their treatment processes have selected solar drying beds to dewater biosolids. The bed floors include synthetic liners, concrete, asphaltic-concrete, and sand. A few beds have drainage collection systems that collect infiltrating water and convey the water to the facility headworks.

Water from dewatered biosolids is typically high in dissolved solids and nutrients. Percolation of this water in solar drying beds may be contributing to the salt and nutrient loading in the receiving groundwater basin. Large facilities with solar dewatering are urged to line the drying beds or change to mechanical dewatering to avoid unnecessary loading of salts and nutrients to groundwater. Where groundwater may be threatened by discharges from solar dewatering, facilities should ensure their solar drying beds are lined to prevent percolating contaminants to groundwater.

Constructed Wetlands

The use of constructed wetlands as a method to provide final treatment and disposal for municipal wastewater continues to grow throughout the country and may be proposed for use in the Lahontan Region. Constructed wetlands are generally of two types: (1) free water surface wetland and, (2) subsurface flow wetlands. Both types of constructed wetlands consist of shallow beds or channels utilizing the roots and rhizosphere of aquatic plants as the surface media for bacteriological activity. Free water surface wetlands also use the chemical uptake by the emergent vegetation and, sometimes floating vegetation (duckweed or water hyacinth) and zooplankters (daphnia) for treatment. Treatment of wastewater through constructed wetlands often achieves effluent of better than secondary treatment quality. Concerns over the use of constructed wetlands in the Lahontan Region include harsh climatic conditions (from excessive heat to excessive cold) that may significantly alter the plants' ability to grow, disposal/harvesting of plant material, and high operation and maintenance costs. At a minimum, constructed wetlands should be designed and constructed using guidelines contained in the USEPA's 1988 manual entitled "Constructed Wetlands and Aquatic Plant Systems for Municipal Wastewater Treatment." Some constructed wetlands are currently in use in the Lake Tahoe Basin for treatment of stormwater (see sections on Stormwater and Wetlands Policy). Constructed

wetlands are also being considered for treatment of acid mine drainage (see section on Mining). Data gathered from these constructed wetlands will provide useful information for future applications of constructed wetlands.

Package Treatment Plant Policy

Commercially available prefabricated treatment plants, known as package treatment plants, were originally designed to serve areas that could not be easily connected to an existing municipal sewage treatment plant. Such areas include the subdivisions constructed in the once remote areas surrounding the major desert communities in the southern portion of the Lahontan Basin and commercial establishments such as restaurants, motels, and RV parks. More recently, package plants have increased to a size that can serve small municipalities. Many plants employing biological treatment were installed with the idea that the plants would operate themselves and therefore, could be turned on and forgotten. However, to meet the current pollution discharge regulations, these plants require daily attention by a knowledgeable, conscientious and certified operator. Without proper maintenance and sludge disposal practices, waste discharges from these plants may cause unacceptable odor and nuisance conditions, and/or violate water quality objectives and waste discharge requirements.

The Regional Board encourages persons to connect new developments to community sewer systems in lieu of the installation and use of package treatment plants. If community sewer systems are not available, and the area and development are unsuitable for individual waste disposal systems because:

1) the density of the subdivision or commercial development is greater than allowable for individual waste disposal systems, ***or***

2) the nitrate as nitrogen concentration of the underlying groundwater equals or exceeds 10 mg/L, then

the Regional Board will likely approve the use of package plants for treating waste discharges from the development. In areas with condition No. 2 above, the effluent from the package treatment plants will be required to meet a total nitrogen limitation of 10 milligrams per liter.

Package Treatment Plant Criteria

a. Design should be based on peak daily flow estimates. A flow equalization chamber at the headworks may be appropriate for some applications so as not to overload the treatment capacity of the plant.

b. Measures to control odor and/or eliminate nearby odor receptors must be included in the design and proposal.

c. Package plants must include adequate storage and/or treatment (digestion) area for waste sludge. Proposed sludge disposal measures must be included in the project plan.

d. For commercial, institutional or industrial systems, pretreatment may be necessary if the chemical composition of the wastewater is significantly different from domestic wastewater.

e. Package plants should contain duplicate equipment components for components subject to failure. If equipment is not on-site, the manufacturer should have the ability to provide replacement equipment to the operator so that a replacement component can be installed within forty-eight hours of failure.

f. Package treatment plants that rely on soil absorption for treatment and/or disposal of any of the wastewater generated will be required to meet the criteria established for individual waste disposal systems (see "Onsite Wastewater Treatment Systems" in this Chapter) applicable to soil absorption and groundwater protection (soils, depth to groundwater, slope of disposal field).

g. Effluent from package treatment plants must meet all current Regional Board criteria. In addition, to be used for reclamation purposes, it must meet all current regulations of the Regional Board and the Department of Public Health regarding reclamation of wastewater (see Wastewater Reclamation Policy, below).

Package Treatment Plant Responsible Entity

The package treatment plant should be owned or controlled by a public agency or a private entity with adequate financial and legal resources to assume responsibility for waste discharges. The owner is ultimately legally and administratively responsible for the performance of the treatment plant. The owner is also responsible for adding capacity and/or renovations to the treatment plant when needed, controlling sewer construction practices in the services area, keeping supplies at the plant, and supervising the operator. The operator of the plant shall be certified in the State of California with the appropriate classification for the specific treatment processes and effluent quality required of the plant.

Additionally, the owner should provide for outside help for special problems which may arise in the operation of the package treatment plant. The outside help may be a consulting engineer, or an operator of a larger treatment plant in a nearby town. The owner shall notify the Regional Board of the certified operator at the plant.

Package Treatment Plant Permitting

The Regional Board will consider the adoption of individual waste discharge requirements (WDRs) or general WDRs for all package treatment plants. WDRs will contain specific effluent limitations (see section on effluent limitations, above). WDRs will also include monitoring and reporting requirements. Monitoring of the effluent may include analyses for the following parameters: flow, biological and/or chemical oxygen demand (BOD/COD), total dissolved solids, suspended solids, total and fecal coliform bacteria, nitrate, total nitrogen, total phosphorus, methylene blue active substances (MBAS), and purgeable halocarbons and aromatics. Monitoring requirements may also include monitoring of the receiving water, including the underlying groundwater. Normally, four groundwater monitoring wells will be required; the Regional Board's Executive Officer may waive the requirement for groundwater monitoring based on site-specific conditions.

Wastewater Recycling

Parts of the Lahontan Region, like California in general, are experiencing an increasing water shortage. In the southern portions of the Lahontan Region, for instance, the Antelope Valley and the Mojave Groundwater Basins are possibly overdrafted due to increased pumping to meet the water demands of the growing Victor Valley, Lancaster and Palmdale areas. In light of this increasing statewide water shortage, development of water supply alternatives is important. For many uses, recycled wastewater is a viable alternative water supply and sales of recycled water can sometimes be used to offset the costs of treating wastewater. (The terms "recycled water" and "water recycling" are now used in the California Water Code in place of the formerly used terms "reclaimed water" and "water reclamation".) Residential graywater use decreases residential water demand and is discussed below in "Onsite Wastewater Treatment Systems."

Recycled water has a wide variety of applications. The applications include agricultural irrigation, landscape irrigation (including highway landscape, parks and golf courses), impoundments for landscape, recreational and/or wildlife uses, wetland and wildlife enhancement, industrial processes (e.g., cooling water, process water, wash water, dust control), construction activities and groundwater recharge.

Wastewater recycling is an important component of wastewater management in the Lahontan Region.

Recycled water in the Lahontan Region is used for golf course, alfalfa and other fodder crops, tree and other agricultural irrigation, and landscape irrigation, as well as for soil compaction and dust control. Some recycled water from the Lancaster Water Reclamation Plant is used for wildlife habitat enhancement at Piute Ponds and to supply a recreational lake at Apollo Lake County Park. Other uses of recycled water, such as for snow making in areas of Lake Arrowhead and Mammoth Lakes, have been proposed to the Regional Board. (See Waste Discharge Prohibitions Section for Mojave River HU for exemption language concerning reclaimed wastewater.)

The State Board adopted the "Policy with Respect to Water Reclamation in California" and the related "Action Plan for Water Reclamation in California" in 1977 (State Board Resolution No. 77-1). This policy specifies actions to be implemented by the State and Regional Boards, as well as other agencies, in relation to reclaimed water use. The policy directs the State and Regional Boards to encourage reclamation and reuse of water, and to promote water reclamation projects which preserve, restore, or enhance instream beneficial uses. The policy also states that the State and Regional Boards recognize the need to protect public health and the environment in the implementation of reclamation projects.

The State Board adopted the "Recycled Water Policy" in 2009 (State Board Resolution No. 2009-0011) and amended the policy in 2013 (Resolution No. 2013-0003). This policy provides direction to the Regional Boards regarding criteria to be used in issuing permits for recycled water projects. The criteria are intended to streamline the permitting of the vast majority of recycled water projects. The policy also requires the development of salt/nutrient management plans to protect groundwater basins.

The Water Code requires Regional Boards to consider the need to develop and use recycled water when establishing water quality objectives. The Water Code also requires the State Department of Health Services (now the Department of Public Health, DPH) to establish statewide recycling criteria for each type of recycled water use to protect public health. Any person proposing to

discharge recycled water must file appropriate information related to the discharge with the Regional Board. After consulting with and receiving recommendations from DPH, and after any necessary public hearing, the Regional Board shall, if necessary to protect the public health, safety or welfare, adopt water reclamation requirements for the recycled water discharge.

The Water Code provides encouragement for the use of recycled water in relation to water rights decisions, as follows (Section 1010 [a][1]):

"The cessation of, or reduction in, the use of water under any existing right regardless of the basis of right, as the result of the use of recycled water, ... is deemed equivalent to and for purposes of maintaining any right shall be construed to constitute, a reasonable beneficial use of water to the extent and in the amount that the recycled ... water is being used not exceeding however, the amount of such reduction."

The Water Code (Section 13522[b]) provides that the use of recycled water pursuant to uniform statewide reclamation criteria "does not cause, constitute, or contribute to, any form of contamination" unless the DPH or the Regional Board determines that contamination exists.

The Water Code (Sections 13523.1 and 13263[h]) allows Regional Boards to issue master reclamation or recycling permits for suppliers and/or distributors of reclaimed or recycled water. Master reclamation permits must include waste discharge requirements and requirements for the following: compliance with statewide reclamation criteria, establishment and enforcement by the permittee of rules or regulations for reclaimed water users, quarterly reporting on reclaimed water use, and periodic compliance inspections of water users by the permittee.

The Water Code (Sections 13550 through 13556) declares that use of potable water for certain purposes (e.g., irrigation of parks, golf courses, cemeteries, and residential landscaping, and toilet and urinal flushing in nonresidential structures) is a waste and unreasonable use of water if nonpotable water is available, under specific conditions. Section 13555.2 declares the Legislature's intent to encourage the design and construction of distribution systems for nonpotable water separate from those for potable water. Section 13556 allows water suppliers to acquire, store, provide, sell and deliver recycled water for any beneficial use if the water use is in accordance with state water recycling criteria and with Chapter 7 of the Water Code.

While the Regional Board supports the concept of water recycling, it must also consider potential impacts from recycling on ground and surface water quality. When reviewing proposed water recycling projects, the Regional Board carefully considers potential public health impacts from pathogens or conservative organic compounds, as well as the potential of the proposed project to create pollution or nuisance conditions. The Board also considers potential impacts on the quality and beneficial uses of any receiving surface or groundwaters including the potential for eutrophication of surface waters due to nutrient loading from recycled water. Discharges of recycled water are prohibited in areas of the Lahontan Region where waste discharge prohibitions are in place, unless exemption criteria, where applicable, can be met. The Water Code (Sections 13529.2 and 13529.4) includes provisions for reporting cleanup, and administrative civil liabilities for unauthorized discharges of recycled water which has been treated at secondary or tertiary levels.

Accumulation of minerals is a common potential impact to receiving waters from recycled water uses. Accumulation of minerals must be minimized to provide for protection of beneficial uses. A variety of techniques can be used. Where well controlled irrigation is practiced, nitrate problems can be controlled. Vegetative uptake will utilize soluble nitrates which would otherwise move into groundwater under a percolation operation. Demineralization techniques or source control of total dissolved solids may be necessary in some areas where groundwaters have been or may be degraded. Presence of excessive salinity, boron, or sodium in the effluent could be a basis for rejection of proposals to irrigate cropland with effluent. However, the Water Code allows issuance of water recycling requirements to a project which **only** violates salinity objectives.

Water Recycling Control Measures for Indian Creek Watershed

Recycled water from the South Tahoe Public Utility District (STPUD) is exported from the Lake Tahoe Basin to Alpine County, where it is used for irrigation. In order to protect the beneficial uses of the Indian Creek watershed, the Regional Board regulates the use of recycled water for irrigation in coordination with regulation of other discharges such as septic systems, irrigation return flows from lands not irrigated with effluent, and stormwater from pasture lands and manure storage areas. (High nutrient and coliform bacteria levels measured in Indian Creek and the lower West Fork Carson River indicate that better management of animal wastes is desirable in these watersheds.) The

amount of nutrients leaching into groundwaters from areas irrigated with domestic wastewater effluent should be minimized.

Facilities Discussion

Wastewater treatment facilities in the Lahontan Region include two regional facilities and more than 50 other municipality, district, community, and commercial wastewater treatment facilities. Only two wastewater treatment facilities discharge to surface waters and are regulated by the Regional Board under the federal National Pollution Discharge Elimination System (NPDES) program. All other wastewater treatment facilities in the Region discharge to land and are regulated under the Waste Discharge Requirements (WDR) program. Information on wastewater treatment facilities regulated by the Regional Board may be accessed from a database on the State Water Resource Control Board's Internet site.

Onsite Wastewater Treatment Systems (Septic Systems)

Onsite Wastewater Treatment System Policy

The State Water Board adopted a *Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment* Systems (OWTS Policy) on June 19, 2012 that became effective May 13, 2013. The OWTS Policy established 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.

For purposes of the OWTS Policy, an OWTS is an individual disposal system, community collection and disposal system, or alternative collection and disposal system that uses subsurface disposal. OWTS do not include "graywater" systems pursuant to Health and Safety Code section 17922.12. The OWTS Policy does not cover (1) any OWTS with a projected flow of over 10,000 gallons-per-day, (2) any OWTS that receives high-strength wastewater, from other than a commercial food service building, and (3) any OWTS that receives high-strength wastewater from a commercial food service building (a) with a biochemical oxygen demand (BOD) higher than 900 milligrams per liter or (b) that does not have a properly sized and functioning oil/grease interceptor.

The OWTS Policy sets standards for OWTS that are constructed or replaced, that are subject to a major repair, that pool or discharge waste to the surface of the ground, and that have affected, or will affect, groundwater or surface water to a degree that makes it unfit for drinking water or other uses, or that cause a health or other public nuisance condition. The OWTS Policy also includes minimum operating requirements for OWTS that may include siting, construction, and performance requirements; requirements for OWTS near certain waters listed as impaired under Section 303(d) of the Clean Water Act; requirements authorizing local agency implementation of the requirements; corrective action requirements; minimum monitoring requirements; exemption criteria; requirements for determining when an existing OWTS is subject to major repair; and a conditional waiver of waste discharge requirements.

The Regional Board incorporates the OWTS Policy into this Basin Plan (see Appendix B). Implementation of the OWTS Policy is overseen by the State Water Board and the Regional Board. Local agencies (e.g., county and city departments and independent districts) have the opportunity to implement local agency management programs (LAMPs) if approved by the Regional Board or the State Water Board. In addition to the OWTS Policy, this Basin Plan includes waste discharge prohibitions in certain areas that are applicable to OWTS.

The OWTS Policy includes provisions that (1) allow existing OWTS to continue in operation unless they are not properly functioning or the Regional Board finds they are not able to adequately protect water quality and (2) allows local agencies to continue to permit existing, new, and replacement OWTS under their existing program until the earlier of (a) the local agency LAMP has been approved by the Regional Board or (b) May 13, 2018, which is five years after the OWTS Policy effective date. The Regional Board may issue or deny waste discharge requirements or waivers of waste discharge requirements for any new or replacement OWTS within the jurisdiction of a local agency without an approved LAMP if that OWTS does not meet the minimum standards contained in Tier 1 of the OWTS Policy.

Onsite Wastewater Treatment Systems Regulated by Other than the OWTS Policy

For those OWTS, package treatment plants, and other sewage-based wastewater discharges not regulated under OWTS Policy, the Regional Board

will apply the following principles and policies in review of water quality factors relating to land developments and waste disposal from individual waste disposal systems:

1. The following criteria will be applied as the minimum to ensure continued adequate protection of water quality, protection of present and future beneficial uses, and prevention of pollution, contamination and nuisance conditions. The Regional Board will prohibit the discharge from individual disposal systems that do not conform to these criteria.

2. These criteria prescribe minimum conditions for waste disposal from individual onsite systems and do not preclude the establishment of more stringent criteria by local agencies or the Regional Board. The Regional Board does not intend to preempt the authority of local agencies and will support local agencies to the fullest extent possible, particularly in the implementation of more stringent regulations.

3. Detailed procedures to implement these criteria and to process exemptions to these criteria are included in "Regional Board Guidelines for Implementation of Criteria for Individual Waste Disposal Systems" (see Appendix C).

4. The criteria contained herein are applicable to the entire Lahontan Region and pertain to any and all proposed building that involves wastewater discharges to other than a community sewer system. The criteria apply to: (1) proposed building on lots within new subdivisions or parcels, **and** (2) proposed building on existing subdivided lots or parcels, **and** (3) proposed subdivisions. The criteria do not apply to: (1) existing individual waste disposal systems, or (2) projects that have final building permits prior to June 16, 1988, unless evidence exists that necessitates retrofit of septic systems to conform with current criteria. The "Regional Board Guidelines for Implementation of Criteria for Individual Waste Disposal Systems" specifies separate exemption procedures for existing developments and for new developments. Existing development includes projects for which **final** development plans, such as a final tract map, were approved by local agencies **prior** to June 16, 1988. New development includes subdivisions or individual parcels which **do not** have final development plans approved by local agencies **prior** to June 16, 1988.

5. These criteria do not apply to projects within septic system prohibition areas where the criteria are more stringent (for prohibitions, see Section 4.1 of this Chapter); and these criteria will preempt less stringent criteria in septic system prohibition areas.

6. Where community sewer systems are available, the Board will encourage connection to the sewer system in lieu of use of individual disposal systems.

Criteria for Individual Waste Disposal Systems

1. ***Maximum Density***

   Individual waste disposal systems associated with new developments that have a gross density greater than two (2) single family equivalent dwelling units per acre will be required to have secondary-level treatment of wastewater. Equivalent dwelling units (EDUs) are defined as a unit of measure used for sizing a development based on the amount of waste generated from that development; the value used in implementation of these criteria is 250 gallons per day per EDU. For the purposes of these criteria, the discharge from a single family dwelling is equal to one EDU. Senior citizen dwelling units and second units as defined in Government Code Sections 65852.1 and 65852.2 will not be considered as additional dwelling units. In addition to residential developments, this secondary level treatment policy also applies to wastewater discharges from commercial, industrial, recreational and all other developments with wastewater discharge volumes exceeding two EDU per acre density (500/gal/day/acre based on 250 gal/day/EDU). Use of new septic systems is permitted in existing developments with lot sizes having a net area greater than or equal to 15,000 square feet. The net area is that contained within the boundaries as set forth in the legal lot description.

2. ***Minimum Distances***

   The Regional Board has established the minimum distances (see Table 4.4-1 entitled, "Minimum Distances for Siting Individual Waste Disposal Systems") necessary to provide protection to water quality and/or public health. Local hydrogeological conditions may necessitate greater separation of the sewage disposal system from a well or watercourse for protection of beneficial uses (e.g., drinking supply and water contact recreation).

3. ***Additional Minimum Criteria***

   a. The percolation rate in the disposal area shall not be slower than 60 minutes per inch if the discharge is to a leachfield or 30 minutes per inch if discharge is to a seepage pit. If percolation rates are faster than 5 minutes per inch, then the soil for a total thickness of five feet below the bottom of the leaching trench shall contain at least 15% of material passing the No. 200 U.S. Standard Sieve and less than one-fourth of the representative soil cross-section shall be occupied by stones larger than 6 inches in diameter. Where the percolation rates are faster than 5 minutes per inch and the above requirement is not met, the minimum distance to ground water between the bottom of the disposal facilities and the anticipated high ground water shall be 40 feet. (The percolation rates shall be determined in accordance with procedures prescribed by the appropriate local public health agency).

   b. Clay, bedrock, other material impervious to the passage of water, or fractured bedrock, shall not be less than 5 feet below the bottom of the leaching trench or less than 10 feet below the bottom of the seepage pit. Impervious is defined for design purposes as a stratum with percolation times of greater than 120 minutes per inch.

   c. Depth to anticipated high ground water below the bottom of the leaching trench shall not be less than 5 feet. Depth to anticipated high ground water below the bottom of the seepage pit shall not be less than 10 feet. Greater depths are required if native material does not provide adequate filtration.

   d. Ground slope in the disposal area shall not be greater than 30 percent.

   e. Minimum criteria specified above must be met within the area of the proposed system and within the 100% expansion area for the proposed system.

Exemptions to the Criteria for Individual Waste Disposal Systems

In certain locations and under special circumstances, the Board or its Executive Officer may waive individual criteria.

1. Waiver of one or more individual criteria may occur if:

   a. The area beneath the proposed septic system discharge has no significant amount of ground water having present or future beneficial uses; or

   b. It can be proven that no pollution, nuisance or unreasonable degradation of either surface or ground waters will occur as a result of the proposed septic system density when considered individually or cumulatively with other discharges in the area; or

   c. Construction of a community collection, treatment, and disposal system is imminent. Short-term, interim use of individual waste disposal systems may be allowed.

Implementation of Criteria for Individual Waste Disposal Systems

1. The Regional Board and the local agencies have adopted, through Memoranda of Understanding, criteria that are compatible with or more stringent than these criteria.

2. The Memoranda of Understanding include the procedures of the review and processing of applications for proposed discharge of wastewater from land developments that only discharge **domestic** waste, including single-family-unit residential, multi-unit residential, commercial, industrial and recreational developments. The Memoranda of Understanding include provisions for Regional Board review and processing of specific application (e.g., for industrial waste discharges).

3. For those local agencies that have adopted these or more stringent criteria, land developments that only discharge **domestic** waste, including single-family-unit residential, multi-unit residential, commercial, industrial and recreational developments, will be permitted entirely by the local agency. (However, the Regional Board reserves the authority to take action, if necessary, as described in item 6 below.)

4. Whenever the proposed development will not meet the minimum criteria and no Memorandum of Understanding or other equivalent document exists between the Regional Board and the local agency, applications for all projects shall be transmitted to the Regional Board along with a complete report of waste discharge and a filing fee.

5. The Regional Board will review, on a project-by-project basis, proposals for commercial, industrial, recreational and all other types of developments that discharge **industrial** waste. If required, the report of waste discharge will contain information on estimated wastewater flows, types of wastes, and occupancy rates that will enable the Regional Board to evaluate the discharge in terms of EDUs.

6. In any case, the Regional Board will prohibit the discharge of wastes from land developments that will result in violation of water quality objectives, will impair present or future beneficial uses of water, or will cause pollution, nuisance, or contamination, or will unreasonably degrade quality of any waters of the State.

Implementation for Other Types of Waste Disposal from Land Developments

1. Severe impact on water quality can result from failure to implement adequate measures to control storm drainage and erosion. Land developers must provide plans for the control of such runoff from initial construction up to the complete build-out of the development. (See "Land Development" section.)

2. The disposal of solid waste can have adverse impacts on water quality and public health. Land developers must submit a plan that conforms to the regional or county master plan and contains adequate provisions for solid waste disposal for complete build-out of the development.

3. The disposal of septic tank sludge is an important part of any area-wide master plan for waste disposal. Land developers must submit a plan that conforms to the regional or county master plan and contains adequate provisions for septic tank sludge disposal for complete build-out of the development.

4. The responsibility for the timely submittal of information necessary for the Board to determine compliance with these guidelines rests with persons submitting proposals for development or discharge. The Porter-Cologne Water Quality Control Act provides that no person shall initiate discharges of waste prior to filing a report of waste discharge and prior to (1) issuance of waste discharge requirements, (2) the expiration of 120 days after submittal of an adequate report of waste discharge, or (3) the issuance of a waiver by the Regional Board.

Alternative Individual Waste Disposal Systems

In areas where conditions do not support the use of conventional individual subsurface waste disposal systems (e.g., septic systems), the use of engineered alternative systems can be considered. Alternative waste disposal systems include, but are not limited to, mound systems, evapotranspiration beds, sand filters (intermittent and/or recirculating), and lined evaporation ponds. The Regional Board supports the use of engineered alternative systems for waste disposal as a remedy for otherwise unsuitable existing lots. However, the Regional Board discourages the use of engineered alternative systems for new construction, lots, or subdivisions.

Several factors the Local Health Officer and/or the Regional Board staff will consider when evaluating a proposal for the use of an alternative system include, but are not limited to:

1. **size of parcel**
2. **density of surrounding development**
3. **depth to ground water and bedrock**
4. **depth of soils** suitable for waste disposal as classified under the USDA classification system
5. **climate**
6. **access**
   (a) for maintenance and pumping year-round
   (b) control to prevent public contact
7. **emergency contingency plans** (including plans for expansion, replacement or repair)
8. **operation and maintenance requirements**
9. **distance to sewer**

Criteria for Alternative Systems

1. The conditions (soils, ground water, slope) that limit the use of conventional septic tank systems may also apply to alternative systems that rely on soil absorption for treatment and/or disposal of all or most of the wastewater generated (see Criteria for Individual Waste Disposal Systems).

2. **Mound Systems**. Mound systems shall be installed in accordance with criteria established in the State Board's *Guidelines for Mound Systems* (1980) or other criteria acceptable to the Executive Officer in conformance with standard engineering practices.

3. **Evapotranspiration Systems**. Evapotranspiration systems shall be installed in accordance with criteria contained in the State Board's *Guidelines for Evapotranspiration Systems* (1980) or other criteria acceptable to the Executive Officer in conformance with standard engineering practices.

4. **Sand Filters**. Sand filters shall be installed in accordance with the specifications for sand filters in the State of Oregon, Department of Environmental Quality's *On-site Sewage Disposal Rules* (July 1, 1991) or other criteria acceptable to the Executive Officer in conformance with standard engineering practices.

5. **Graywater Systems**. Graywater is untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthy processing, manufacturing, or operating wastes. Graywater includes wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines, and laundry tubs, but does not include wastewater from kitchen sinks or dishwashers. (H&S Code § 17922.12.) Graywater systems may be an acceptable method of disposal in conjunction with a composting toilet or holding tank to handle black water. Examples of appropriate applications include recreational areas such as campgrounds, day use facilities, trailheads, and residential and commercial facilities where graywater can be managed and disposed in a manner protective of water quality. Graywater systems shall be installed in accordance with the California Plumbing Code (24 Cal. Code of Regs., Part 5) and the local administrative authority. If properly constructed and operated, graywater systems are not expected to create a nuisance or pollution.

6. Other proposals for alternative systems shall be evaluated jointly by the local regulatory agency and Regional Board staff on a case-by-case basis. Some engineered systems may be considered experimental by the Regional Board. Experimental systems will be handled with caution. A trial period of at least one year should be established whereby proper system operation must be demonstrated. Under such an approach, experimental systems are granted a one-year conditional approval.

7. All proposals for alternative systems shall be designed by a Civil Engineer, Engineering Geologist or Sanitarian licensed to practice in California.

Maintenance Requirements

System designers should be responsible for developing specifications and procedures for proper system operation. Designers should provide to system owners an informational operation and maintenance document that includes: (1) clear and concise procedures for operation and maintenance, and (2) instructions for repair and/or replacement of critical items within forty-eight hours following failure. Engineered systems should be inspected by a licensed Civil Engineer, Engineering Geologist or Sanitarian during installation to insure conformance with approved plans.

Permitting Authority

The County Health Officer may approve alternative systems when **all** of the following conditions are met:

1. The Health Officer has found the system to be in compliance with criteria approved by the Regional Board Executive Officer (see Criteria for Individual Waste Disposal Systems and Criteria for Alternative Systems above); ***and***

2. The Health Officer has either: (1) informed the Regional Board Executive Officer of the proposal to use the alternative system and the Executive Officer agrees that it complies with the finding in (a) above; or (2) a written agreement that the Executive Officer has delegated approval authority to the County Health Officer; ***and***

3. A public or private entity has agreed in writing to assume responsibility for the inspection, monitoring, maintenance, and eventual decommissioning/reclamation of the system.

If all of the above conditions cannot be met, the Regional Board will consider issuing waste discharge requirements for alternative systems.

Table 4.4-1
MINIMUM DISTANCES FOR SITING WASTE DISPOSAL SYSTEMS (in feet)

Facility	Domestic Well	Public Well	Perennial Stream[1]	Drainage Course or Ephemeral Stream[2]
Septic tank or sewer line	50	50	50	25
Leaching field	100	100	100	50
Seepage pit	150	150	100	50
Facility	Fill Bank[3]	Cut or Property Line[4]	Lake or Reservoir[5]	
Septic tank or sewer pit	10	25	50	
Leaching field	4h	50	200	
Seepage pit	4h[6]	75	200	

1 As measured from the line which defines the limit of a 100-year-frequency flood.

2 As measured from the edge of the channel.

3 Distance in feet equals four times the vertical height of the cut or fill bank. Distance is measured from the top edge of the bank.

4 Distance in feet from property line of any neighboring lot on which individual well(s) are used. (Distances are to property lines of neighboring lots, i.e., not street easements)

5 As measured from the high water line. (Regional Board Resolution No. 82-6 defines the high water line for Eagle Lake, Eagle Drainage Hydrologic Area as 5117.5 feet, a definition used in prohibiting the discharge of wastes from subsurface disposal systems on a lot with an elevation of less than 5130 feet. See Section 4.1 of this Basin Plan for waste discharge prohibitions for Eagle Lake.)

6 As measured from the high seepage level.

APPENDIX C

Regional Board Guidelines for Implementation of Criteria for Individual Waste Disposal Systems

REGIONAL BOARD GUIDELINES FOR IMPLEMENTATION OF CRITERIA FOR INDIVIDUAL WASTE DISPOSAL SYSTEMS

The following guidelines will be used by the Executive Officer to: (1) implement the 1988 Amendments to the Water Quality Control Plans for the North and South Lahontan Basins Concerning the Criteria for Individual Waste Disposal Systems and (2) consider exemptions to the maximum density criteria (2 EDU's per acre) for individual waste disposal systems.

Terms, such as "existing land development", are defined in a Definition List included in the 1988 Amendments to the Water Quality Control Plans for the North and South Lahontan Basins Concerning the Criteria for Individual Waste Disposal Systems.

I. GENERAL IMPLEMENTATION

A. Once a local agency has agreed to implement the Regional Board Criteria for Individual Waste Disposal Systems, applications for the use of individual waste disposal systems which meet the Regional Board criteria and are for domestic waste discharges from residential, recreational, commercial and industrial developments shall be processed entirely by the local agency.

B. Applications for the use of individual waste disposal systems for discharges of industrial waste from recreational, commercial and industrial developments shall be reviewed by the Executive Officer, and a Report of Waste Discharge including filing fee may be required.

C. If requested by the local agency and/or discharger, applications for land developments which do not meet the minimum criteria will' be reviewed by the Executive Officer for consideration of granting an exemption (see Sections II through V below). If an area-wide exemption is granted, individual applications in these areas will be processed by the local agency.

D. The Regional Board retains the authority to review proposals for all other types of waste discharges (such as stormwater runoff and solid waste) from land developments and issue waste discharge requirements, if appropriate.

II. GENERAL PROVISIONS APPLICABLE TO ALL EXEMPTIONS

A. The Executive Officer will consider granting exemptions to the maximum density criteria (2 EDU's per acre) contained in the Criteria for Individual Waste Disposal Systems. Exemptions may be granted if:

1. The area beneath the proposed septic system discharge has no significant amount of groundwater having present or future beneficial uses; or

2. It can be proven that no pollution, nuisance or unreasonable degradation of either surface or groundwaters will occur as a result of the proposed septic system density when considered individually or cumulatively with other discharges in the area; or

3. Construction of a community collection, treatment and disposal system is imminent. Short term, interim use of individual waste disposal systems may be allowed.

B. The following provisions apply to all exemptions:

1. Exemptions can be granted for individual persons, small communities, distinct portions of larger communities, or distinct groundwater basins or portions, thereof.

2. Exemptions will normally be granted by the Executive Officer. However, exemptions can be taken to the Regional Board for its consideration. This would normally occur if the exemption applies to a large area or is considered controversial. Decisions of the Executive Officer may be appealed to the Regional Board.

3. For an exemption to the minimum lot size requirements to be granted, all other applicable siting criteria (e.g. depth to groundwater, percolation rate, soil type, minimum distances, etc.) must be met.

4. Environmental documentation pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code 21000, et. seq.) may be required as part of the application for exemptions.

III. PROVISIONS FOR EXEMPTIONS FOR CONSTRUCTION OF INDIVIDUAL WASTE DISPOSAL SYSTEMS FOR SINGLE FAMILY UNITS IN EXISTING LAND DEVELOPMENTS

A. The local agency and/or discharger will supply the Executive Officer with the available information on Items numbered 1 through 6 of Attachment 1. After review, the Executive Officer may request the discharger to supply more detailed information on any or all items in Attachment 1, if necessary.

B. In addition to the information submitted by the local agency and/or discharger, the information listed in Attachment 2 will be considered by the Executive Officer.

C. The Executive Officer will review the above information as it pertains to existing and potential water quality impacts.

1. If any of the general provisions for granting exemptions as outlined in II. A. of these guidelines are met, exemptions may be granted.

2. If none of the general provisions for granting exemptions as outlined in II. A. of these guidelines are met, exemptions will not be granted.

IV. PROVISIONS FOR EXEMPTIONS FOR CONSTRUCTION OF INDIYIDUAL WASTE DISPOSAL SYSTEMS FOR MULTI-FAMILY UNITS, COMMERCIAL, RECREATIONAL AND INDUSTRIAL DEVELOPMENTS IN EXISTING LAND DEVELOPMENTS

A. The local agency and/or discharger shall submit to the Executive Officer information on Items 1-9 listed in Attachment 1 in as much detail as possible.

B. In addition to the information submitted by the local agency and/or discharger, the information listed in Attachment 2 will be considered by the Executive Officer.

C. The Executive Officer will conduct an initial review of the above information and determine if a Report of Waste Discharge (including filing fee) is required.

D. The Executive Officer will conduct a comprehensive review of the submitted information as it pertains to existing and potential water quality impacts.

1. If any of the general provisions for granting exemptions as outlined in II. A. of these guidelines are met, exemptions may be granted.

2. If none of the general provisions for granting exemptions as outlined in II. A. of these guidelines are met, exemptions will not be granted.

V. PROVISIONS FOR EXEMPTIONS FOR NEW LAND DEVELOPMENT

A. The local agency and/or discharger shall submit to the Executive Officer a complete Report of Waste Discharge, including filing fee, and detailed information on Items 1 through 9 of Attachment 1.

B. In addition to the information submitted by the local agency and/or discharger, the information listed in Attachment 2 will be considered by the Executive Officer.

C. The Executive Officer will review the submitted information as it pertains to existing and potential water quality impacts.

1. If any of the general provisions for granting exemptions as outlined in II. A. of these guidelines are met, exemptions may be granted. Waste discharge requirements may be adopted by the Regional Board.

2. If none of the general provision for granting exemptions as outlined in II. A. of these guidelines are met, exemptions will not be granted.

VI. RESCISSION OF EXEMPTIONS

A. Exemptions will be rescinded if:

1. It appears that water quality or the beneficial uses of waters are threatened or degraded or if a nuisance, pollution or contamination is caused or threatened; or

2. Any condition of the exemption is violated.

B. No discharge of waste into the waters of the state, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the state are privileges, not rights. (Water Code Section 13263 (g))

ATTACHMENT 1

ITEMS TO BE SUBMITTED TO THE REGIONAL BOARD FOR REVIEW

1. Number, size and location of improved lots in the surrounding area (subdivision, community or portion thereof, distinct groundwater basin or portion thereof) being considered for exemption.
2. Number, size and location of unimproved lots in the area being considered for exemption.
3. Availability of sewering or connection to other secondary wastewater treatment facility.
4. Surface and/or groundwater quality in the vicinity of the proposed exemptions.
5. Hydrogeologic characteristics (e.g. depth to groundwater, soil type, etc).
6. Development density and trends.
7. Assessment of historic, current and future groundwater quality impacts within and surrounding the area being considered for exemption.
8. Assessment of whether or not the wastewater discharges from the proposed development will individually or collectively, or in connection with discharges from surrounding areas, degrade the quality of, or impact beneficial uses of, surface or groundwater.
9. Other site-specific information which may aid the Regional Board in the evaluation process.

ATTACHMENT 2

ADDITIONAL INFORMATION TO BE CONSIDERED BY THE REGIONAL BOARD

In addition to information submitted by the local agency and/or the discharger for exemptions, the Executive Officer will consider all relevant information, including, but not limited to:

1. Water quality standards (designated beneficial uses and numerical and narrative water quality objectives) for the surface waters and/or groundwaters which could be affected by the discharge.
2. The most recent federal and state water quality criteria for chemical and biological constituents of septic system effluent.
3. The most recent technical literature on septic systems and their water quality impacts.
4. The history of water quality problems in the project area, as documented in the Regional Board's files.
5. The most recent water quality monitoring data.
6. Comments of other agencies, including any necessary consultation with the Department of Fish and Game pursuant to the California Endangered Species Act.
7. Background information on the project area from County general plans, local limnological or hydrogeological studies, etc.