



MONO COUNTY HEALTH DEPARTMENT

Environmental Health

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Mono County LAMP – May 2016 DRAFT

INTRODUCTION

The Local Area Management Plan (LAMP) is the required end result of California Assembly Bill 885, which was approved on September 27, 2000. This legislation directed the State Water Resources Control Board (SWRCB) to develop uniform, statewide standards for onsite wastewater treatment systems (OWTS) that are to be implemented by qualified local agencies. The SWRCB adopted the Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems (OWTS Policy) on June 19, 2012 and it became effective on May 13, 2013. The OWTS Policy allows local agencies to approve OWTS, based on a local ordinance, after approval of a LAMP by the Regional Water Quality Control Board, Lahontan Region in this case.

The implementation of this LAMP will allow the continued use of OWTS within the jurisdiction of Mono County while protecting public health and water quality. The LAMP is designed to protect groundwater and surface waters from contamination through the proper design, placement, installation, maintenance and assessment of OWTS. This plan develops minimum standards for the treatment and ultimate disposal of sewage through the use of OWTS in Mono County. The LAMP does not include the following which require individual waste discharge requirements or a waiver of individual waste discharge requirements from the RWQCB:

- Any OWTS with a projected wastewater flow of over 500 gallons per day per acre.
- Any OWTS that generates industrial or commercial high strength wastewater.

The Mono County Health Department, Environmental Health Division (MCEH) has managed the OWTS program in Mono County for many decades. For conventional OWTS, permitting criteria has always been based on the Lahontan Basin Plan, the California Plumbing Code (CPC), Appendix K, as well as concepts from the USEPA Design Manual – Onsite Wastewater Treatment and Disposal Systems (EPA Manual) and the Manual of Septic Tank Practice. Alternative or supplemental system designs are also in use in Mono County and these designs have been reviewed and approved by the California Regional Water Quality Control Board – Lahontan Region (LRWQCB). In addition, a Memorandum of Understanding (MOU) between the LRWQCB and Mono County, established and signed in January 1989, is in effect and MCEH adheres to the requirements set forth in this MOU.

Mono County is a relatively large county (greater than 3,000 square miles), and is also a remote, rural county, with a permanent population of around 15,000. Additionally, more than 90% of Mono County lands are public land or private land owned by the City of Los Angeles. As a



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result the Mono County population remains steady, and it is assumed there will not be significant development and/or population growth in the future. All of the county's larger population centers are sewered and OWTS are banned in these areas, as properties must be serviced by a community sewer when one exists within 200 feet of the property, with certain allowances related to excessive cost. Sewered areas include the communities of Crowley Lake/Hilton Creek, Mammoth Lakes, June Lake, Lee Vining and Bridgeport. Residential communities adjacent to the larger sewered systems, and all other rural areas in the County are served by OWTS. Due to the relatively low loading rates from existing OWTS, in combination with minimal new development, there has been little history of failing systems over the years. Historically, groundwater analyses from public water systems' water wells, as well as from private water wells, have shown virtually no groundwater contamination in any community where OWTS are presently in use in Mono County. Towards that purpose, this LAMP will strive to maintain the "status quo" wherever possible, and to incorporate new requirements as directed by the OWTS Policy.

Tier 2 (LAMP) OWTS

New or replacement OWTS meeting low risk siting and design requirements are to be constructed per Tier 1 criteria noted in the State OWTS Policy (June 19, 2012), with the following exceptions:

- Minimum Depth to Groundwater/Minimum Soil Depth: In lieu of Table 2 of the State OWTS Policy, for sites with percolation rates from 5 to 60 minute per inch (MPI) there shall exist a soil thickness layer of not less than 5 feet from the bottom of the leach trench to groundwater or an impervious layer such as clay, bedrock or fractured bedrock. Impervious is defined as a stratum with percolation rates greater than 120 MPI. For sites with percolation rates from 1- 5 MPI, the anticipated high groundwater level shall be at least 40 feet below the bottom of the leach trench. For sites with percolation rates greater than 60 MPI, OWTS with supplemental treatment will be required, where applicable. (7.3; 8.15)
- 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 implementation of this LAMP shall not exceed two equivalent dwelling units per acre (2 EDU/acre), or its equivalent for single family residences where an OWTS will be utilized for onsite sewage disposal. Existing subdivisions in Mono County that already received exemptions from the LRWQCB for the 2 EDU/acre requirement in the Basin Plan will continue to receive that exemption. Undeveloped lots in these existing subdivisions will be issued OWTS permits under the requirements outlined in the LAMP, to the greatest extent possible, for all criteria with the exception to density.



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(Note: OWTS policy Table 1 would decrease onsite waste disposal system densities to 2.5 acres per single family dwelling, based on the annual precipitation guide. This LAMP proposes to maintain the historic densities allowed in the Lahontan Basin Plan, mainly a maximum gross density of no more than two EDU per acre for new developments. Historic records indicate that communities served by onsite wastewater disposal systems show little indication of degradation of groundwater aquifer quality due to onsite systems. Mono County has a population of just 15,000 people over the three thousand square miles of the County. More than 90% of Mono County is public land or otherwise not subject to development. With low population density, and little opportunity for growth, the historic standard of 2 EDU per acre for new development has proven more than adequate in protecting human health and groundwater quality. For existing developments, onsite waste disposal densities should meet the new development standard, above, whenever possible, but greater densities shall be allowed where other circumstances dictate, as long as groundwater protection can be maintained.)

- Dispersal systems shall be sized per Appendix K of the CPC. Accordingly, for gravel-less chamber systems, no sidewall credit is given, only bottom width credit. However, for these systems, a 0.7 factor/credit of the rock and perforated pipe system infiltrative area requirements is allowed. (8.1.6; 8.1.11)
- Ground slope in the disposal area shall not be greater than 30% (7.7)
- Cesspools and seepage pits will not be approved for use in Mono County. In the instance where a cesspool or seepage pit is in present use and functioning satisfactorily, no action will be taken to require its replacement until such time that the system is failing or no longer functioning satisfactorily. (8.1.6)
- For existing undeveloped lots, and for replacement systems, the standards stipulated in this LAMP for new systems shall be upheld wherever possible. Where existing physical constraints will not allow this, systems will be installed as close to standards as possible, but in no case will be allowed where significant degradation of the environment or a threat to human health would occur.

Tier 2 (LAMP) OWTS with Supplemental Treatment

OWTS with supplemental treatment (STS), also known as alternative OWTS, are OWTS that include some type of advanced treatment in addition to the primary treatment that occurs in a septic tank used with a conventional OWTS. STS are used to overcome specific site constraints generally having to do with high groundwater or shallow soils and provide the additional treatment necessary that will not be provided in the soil. Examples include aerobic treatment units, sand or textile filters, mound systems and pressure dosed systems. Sites that cannot meet



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the low risk criteria for a conventional system will be required to install an STS. All STS must be designed by an appropriate qualified professional.

Design Criteria

1. All supplemental treatment components of an STS must be certified by the National Sanitation Foundation (NSF) to meet the minimum requirements of NSF Standard 40 or must meet standards approved by MCEH and the LRWQCB.
2. Percolation testing, soil depth evaluations and groundwater elevation determinations shall be performed by a qualified professional. Percolation testing will be performed at the proposed installation depth of the dispersal field and shall follow the procedures stated in this LAMP.
3. Treated effluent from all STS shall be discharged to a subsurface dispersal system consisting of leach lines, leach beds or pressurized drip dispersal systems.
4. System sizing for dispersal systems that utilize leach lines or leach beds shall be the same as those used for conventional OWTS.
5. Pressurized drip dispersal systems shall be designed and installed per the manufacturer's recommendations.
6. A minimum 2 foot separation between the bottom of the dispersal system to the highest anticipated level to which groundwater could be expected to rise is required for STS.
7. The STS shall be equipped with a visual and audible alarm that alerts the owner and/or qualified service provider of system malfunctions.

Operation and Maintenance

1. All STS owners shall be provided with 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. A copy shall be maintained at the site and shall be available to the qualified service provider.
2. All STS maintenance shall be performed by a qualified service provider and in some instances a maintenance contract may be required throughout the life of the STS.
3. All failures, malfunctions, service requests, alarms, or other instances where an STS requires the attention of a qualified service provider shall be reported to MCEH within 72 hours of the incident occurring.

Data Collection/Reporting/Notifications

As a condition of MCEH oversight of OWTS within Mono County, MCEH has certain responsibilities related to data collection and reporting to the LRWQCB, as well as in some instances to the owners of water systems and the State Water Resources Control Board Division of Drinking Water. This section will detail the data that must be collected and the procedure for reporting to the LRWQCB and notifications to owners of water systems and SWRCB.



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Reporting to the LRWQCB

On an annual basis, MCEH will collect data for and report in tabular spreadsheet format the following information. A copy of the report will be provided to the LRWQCB.

1. The number and location of complaints pertaining to OWTS operation and maintenance, and identification of those which were investigated and how they were resolved.
2. The number, location and description of permits issued for new and replacement OWTS and under which Tier the permit was issued. Also include the design flow of the OWTS. The Tier designations can be found in the State Water Board's OWTS Policy.
3. The number, location and description of permits issued for OWTS where a variance from the approved LAMP was granted.
4. The applications and registrations issued for sewage haulers as part of the local septic tank cleaning registration program.

In addition, MCEH must 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 assessment program will include monitoring and analysis of water quality data, review of complaints, failures and OWTS inspections. The water quality data can be obtained from the following sources:

- a. Random well samples.
- b. Well samples taken to establish a well as a "potable source".
- c. Routine water samples taken by Community Water Systems.
- d. Any other sampling data deemed relevant or necessary for the protection of ground/surface water supplies.

A summary of the data shall be submitted on an annual basis on or before February 1st. An evaluation of the monitoring program and an assessment of whether water quality is being impacted by OWTS shall be submitted every 5 years.

Notifications to Owners of Water Systems and SWRCB

Existing or proposed OWTS in close proximity to public water wells and surface water drinking water supplies have some potential to cause an impact on the water quality from that water source. The owner of that water system, or SWRCB if the owner of the system cannot be identified, will be notified under the following conditions:

1. Prior to issuance of a permit to install a new or replacement OWTS, the water system owner will be notified when the OWTS will be within a horizontal sanitary setback to a public well. Likewise, the owner will be notified if the water system source is surface water and 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, or is otherwise located such that it may impact water quality at the intake point. This will provide opportunity for the water system



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owner to submit comments to MCEH prior to permit issuance. Notification will be done electronically or in writing by MCEH with a copy of the OWTS permit application that includes:

- a. A topographical plot plan for the parcel showing the OWTS components, property boundaries, proposed structures, physical address, and name of the property owner.
- b. The estimated wastewater flows, intended use of proposed structure generating the wastewater, soil data, and estimated depth to seasonally saturated soils.
- c. An advisement that the public water system owner or SWRCB shall have 15 days from receipt of the permit application to provide recommendations and comments to MCEH.

2. The owner of a public water system will be notified upon discovery of a failing OWTS that is within 150 feet of a public water well. For surface water sources, notification will take place when the OWTS is within 400 feet of the high water mark of a surface water drinking water supply where the dispersal system is within 1,200 feet of the water system's surface water treatment plant intake, or is in the catchment of the drainage and located such that it may impact water quality at the intake point; or is within 200 feet of the high water mark of a surface water drinking water supply where the dispersal system is between 1,200 and 2,500 feet of the water system's surface water treatment plant intake, or is in the catchment of the drainage and located such that it may impact water quality at the intake point. Notification will be done electronically or in writing and will include proposed corrective action that will be taken to mitigate the failure.

OWTS Near Impaired Water Bodies

Existing, new or replacement OWTS that are near impaired water bodies may be addressed by a TMDL and its implementation program, or special provisions contained in the LAMP. If there is no TMDL or special provisions, new or replacement OWTS within 600 feet of impaired water bodies listed in Attachment 2 of the State's OWTS Policy must meet the applicable specific requirements found in Tier 3 of the State's OWTS Policy, or as otherwise specified in the LAMP. Currently, no impaired water bodies in Mono County are listed in Attachment 2 of the State's OWTS Policy. It is anticipated that some or all impaired water bodies that have been identified in Mono County will be listed in Attachment 2 in the future. At such time as an impaired water body is listed, MCEH will follow the applicable specific requirements found in Tier 3 of the State's OWTS Policy or develop and obtain approval from the LRWQCB of its own Advanced Protection Management Program for the specified impaired water body.

An impaired water body of significance is Upper Twin Lakes, near Bridgeport. Historically, elevated nitrate levels in this water body have been identified. The Twin Lakes Subdivision is located at Upper Twin Lakes. At present, the Twin Lakes Subdivision is at build-out based on the Basin Plan density requirement of no more than 2 EDU/acre. Unlike other existing subdivisions in Mono County that received exemptions from the LRWQCB for higher densities, Twin Lakes Subdivision received no exemption. The Twin Lakes Subdivision is approximately



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100 acres in area and 200 OWTS permits have been issued to date. This leaves approximately 60 lots that cannot be built upon due to the maximum density requirement in the Basin Plan.

This LAMP requests that the LRWQCB provide the Twin Lakes Subdivision a density exemption, as was provided to all other existing subdivisions in Mono County in 1989. Accordingly, this LAMP will require Tier 3 - OWTS on the remaining undeveloped lots within the Twin Lakes Subdivision, as well as for replacement OWTS on developed lots, where deemed necessary, under the following conditions:

- a. An Advanced Protection Management Program (APMP) shall be created for the Twin Lakes Subdivision.
- b. All new and replacement OWTS shall incorporate supplemental treatment (STS) with a design certified by NSF or other approved third party tester, and approved by the LRWQCB, that effectively reduces nitrate concentration in the OWTS effluent by 50% or greater.
- c. STS shall be designed by a licensed Civil Engineer. The engineer shall prepare a report that identifies all components of the STS and that is also specific to the lot for which it is designed. A copy of the report shall be submitted to MCEH along with the OWTS permit application.
- d. Setback requirement for all new and replacement Tier 3 - OWTS shall meet criteria set forth in the LAMP for Tier 2 - OWTS.
- e. Routine inspection and maintenance of all STS is required.
- f. The APMP will require groundwater or surface water monitoring, when applicable.

The LAMP will require an APMP for any new development in all other Tier 3 – Impaired Areas listed in Attachment 2 of the OWTS Policy and will require appropriate STS within those areas.

OWTS Requiring Corrective Action

All OWTS have the potential to fail due to age, misuse or improper design and the failure may result in surfacing effluent, wastewater being discharged to the ground surface or wastewater backing up into plumbing fixtures. These failures will require corrective action to mitigate any risk to public health or contamination of the environment. This chapter will detail the corrective action that will be required in the event an OWTS fails and enforcement actions that will be taken if the corrective action is not completed within acceptable time frames.

Corrective Action Requirements

1. MCEH will complete an investigation within 24 hours to determine the validity of the complaint or other notification of a failing OWTS.
2. Any OWTS that is found to be failing shall have a notice of violation issued to the property owner requiring action to eliminate the immediate health hazard through pumping of the septic



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tank by a licensed sewage hauler, or cessation of wastewater flows to the failing OWTS by temporary relocation of the residents. The notice of violation will also require a repair to be completed to the OWTS, as needed, within a reasonable timeframe.

3. The proposed repair shall be evaluated by MCEH to ensure it meets the minimum design requirements of this LAMP or is in substantial conformance to the greatest extent practicable.

4. The repair shall be completed following issuance of a permit and the repairs shall be inspected by MCEH.

5. Failure to complete the required corrective action within the timeframes given will result in additional enforcement action which may include condemnation of the structure for immediate health hazards.

Substandard Systems

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