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 on June 19, 2012 (OWTS Policy) 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, in this case, Lahontan Regional Water Quality Control Board (Lahontan).

The purpose of the LAMP is to allow the continued use of OWTS within the jurisdiction of Inyo 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 Inyo 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 2,500 gallons per day.
- Any OWTS that generates industrial or commercial high strength wastewater.

The Inyo County Environmental Health Services Department (EH) has managed the OWTS program in Inyo County for many decades. Permitting criteria has always been based on both the Lahontan Basin Plan and the California Plumbing Code, Appendix K. Memorandums of Understanding (MOU's) assigning areas of responsibility have been created and adhered to by Lahontan and EH.

Inyo County is a geographically large (greater than 10,000 square miles) county, and is also a remote, rural county, with a permanent population of around 18,000. Additionally, more than 98% of Inyo County lands are government owned property. Because of this, the County population remains steady, and it is assumed there will not be significant development and/or population growth in the future. Most of the county's population centers are sewered, and OWTS are not allowed in these areas. OWTS are also not allowed when located within 200 feet of existing sewered systems where feasible to connect. Sewered areas include the Bishop area, Rovana, Aspendell, Big Pine, Independence, Knight Manor, Lone Pine and Furnace Creek. 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 of the existing OWTS, in combination with minimal new development, there has been little history of failing systems over the years. The relatively pristine groundwater aquifers and the lack of any nitrogen or bacteriological contaminated surface waters (303(d) listed) are testimony to the effectiveness of the OWTS regulatory program in Inyo County over the years. 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 1 OWTS

New or replacement OWTS meeting low risk siting and design requirements (Tier 1) are to be constructed per 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 five 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. (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 implemented under Tier 1 shall not exceed one single family dwelling unit, or equivalent, per 0.5 acres.

  (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’s per acre for new developments. Historic records indicate that communities served by onsite waste disposal systems show little indication of degradation of groundwater aquifer quality due to onsite systems. Inyo County has a population of just 18,000 people over the ten thousand square miles of the County. More than 98% of Inyo County is government owned. With low population density, and little opportunity for growth, the historic standard of 2.0 EDU’s 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 a leachfield, designed using a trench width of no greater than three feet. Infiltrative area shall be calculated by adding the trench depth from one foot below the leach pipe to the bottom of trench, multiplied by two (for both sides) plus the width of the bottom of the trench. This linear footage amount is then multiplied by the total length of leachline in order to obtain the total cubic footage of infiltrative area. 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)

- For existing undeveloped lots, and for replacement systems, the standards stipulated in this policy for new systems shall be upheld wherever possible. Where existing physical constraints will not allow this, systems will be installed as close to standard as possible, but in no case will be allowed where significant degradation of the environment or a threat to human health would occur.

Restricted Areas

The 2014 version of the Lahontan Basin Plan includes several waste discharge prohibition areas throughout Inyo County. This is problematic as there are many existing onsite wastewater disposal systems throughout these supposed prohibition areas. For the most part, the reasoning for these prohibitions are unknown, or based on criteria that are no longer applicable. While AB885 does not afford the opportunity to modify waste discharge area prohibitions designated in Basin Plans, a discussion is presented below in hopes that future modifications to the Basin Plan could occur that would more accurately reflect current conditions.

1. Prohibition 1d: This area runs north-south on either side of highway 395 from the Inyo Mono border south to Lone Pine. It appears to mainly include Inyo National Forest lands. There is development along the roadways that access the national forest, mainly summer cabins and recreational facilities. Many of these buildings are served by onsite wastewater disposal systems. It is proposed to continue to allow development served by onsite systems.
2. Prohibition 3a & 4b(1): This area is served by the Eastern Sierra CSD sewer system (Assessment District No. 1). Onsite systems are not allowed.
3. Prohibition Area 3c & 4b): This is within the City of Bishop and sewage is collected in the City of Bishop sewer system. No onsite systems are allowed in this area.
4. Prohibition 4b(3): Rocking K Subdivision: This residential area is served by onsite wastewater disposal areas. Onsite systems should be allowed for development of vacant lots. This prohibition area should be removed.
5. Prohibition 3b: This residential area is in the Aspendell subdivision and surrounding areas. OWTS should be allowed when access to the sewer system is not feasible and all design criteria can be met.
6. Prohibition 4b(2): This residential area is in the Mountain View Estates subdivision and surrounding areas. Prohibition was removed in the 1990's due to changing circumstances which led to the prohibition. An old poorly located, inadequately constructed public supply well for the Mountain View Estates public water system was experiencing e. coli. contamination. This well has since been abandoned, a new well constructed per standards and properly located. No coliform contamination in the new well. OWTS's should continue to be allowed.
7. Mustang Mesa: This area was under a building moratorium for many years. An MOU between the RWQCB, EH and the MMCSD was issued in the 1990's to allow for lifting of the building moratorium if OWTS restrictions and increased monitoring was implemented. Monitoring data for a 20 year period has been accumulated and reviewed, and no degradation of groundwater has been observed. This area shall continue to be allowed to develop with alternative OWTS's.

Tier 2 OWTS – LAMP (OPTION 1)

OWTS with Supplemental Treatment

OWTS with supplemental treatment (STS), also known as alternative OWTS, are OWTS that includes 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 the low risk criteria for a Tier 1 system will be required to install an alternative OWTS. All alternative OWTS must be designed by the appropriate qualified professional.

Design Criteria

1. All supplemental treatment components of a 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 EH and the RWQCB.
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.
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 alternative OWTS 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 EH within 72 hours of the incident occurring.

Data Collection/Reporting/Notifications

As a condition of EH oversight of OWTS within Inyo County, EH has certain responsibilities related to data collection and reporting to the Lahontan Regional Water Quality Control Board, 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 RWQCB and notifications to owners of water systems and SWRCB.

Reporting To RWQCB

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

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, EH 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 flowing 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 the potential to cause an impact on the water quality from that water source and the owner of that 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 replaced OWTS that is within a horizontal sanitary setback to the public well; or within 1,200 feet of an intake point for a surface water treatment plant for drinking water, 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, or if the OWTS is within a horizontal sanitary setback from a public well, to allow the water system owner to provide comments to EH. Notification will be done electronically or in writing by EH with a copy of the 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 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 EH.

2. Upon discovery of a failing OWTS that is within 150 feet of a public water well, 200 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 intake, within the catchment of the drainage and located such that it may impact water quality at the intake point, or 400 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 intake, within 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.

Tier 2 OWTS – LAMP (OPTION 2)

OWTS with Supplemental Treatment

OWTS with supplemental treatment (STS), also known as alternative OWTS, are OWTS that includes 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 the low risk criteria for a Tier 1 system will be required to install an alternative OWTS. All alternative OWTS must be designed by the appropriate qualified professional.

- Tier 2 OWTS will have different design criteria than Tier 1 (conventional) systems. This may be due to either physical constraints such as soil characteristics or depth to groundwater, or the inability to meet density and setback requirements. These systems will be identified during the early stages of the permitting process, and the applicant will be advised that they will be required to have a qualified professional design their system. The need for operation and maintenance agreements of the creation of onsite management districts is not required, due to the low number of permit applications typically received.
- All situations described in Section 9.1 of the OWTS Policy will be considered during the permit application process in order to determine whether the proposed system will be classified as a Tier 1 or a Tier 2 system. Tier 2 sstems will be designed by a qualified professional.
- OWTS covered by this LAMP are defined on the first page of this document. Permit procedures require EH staff to conduct a site evaluation, design considerations and construction requirements prior to issuing a permit.
- Variances to this LAMP, or to the OWTS Policy, excluding sections 9.4.1 through 9.4.9, for new installations and repairs in substantial compliance will be considered on a case by case basis, and will be allowed, to the minimum extent possible, if there is no significant impact to water quality or human health.

- Qualified personnel shall be utilized for the design, installation and maintenance of all Tier 2 OWTS.
- Tier 2 system owners shall be educated as to the location, operation and maintenance of their OWTS via an operations manual, plans and specifications and/or manufacturers literature so that any system failures can be repaired or replaced within 48 hours, and all efforts made to eliminate any unauthorized discharges created by the failure..
- Septage haulers, septage disposal sites and quantities of septage disposed of shall be tracked and analyzed for adequacy.
- There is no need for the creation of onsite maintenance districts or zones.
- There is no need to develop/implement Regional Salt and Nutrient Management Plans.
- Coordination with existing watershed management groups will be a part of the permitting process.
- During the permitting process, identification and feasibility of connecting to any nearby sewer systems will be conducted.
- Prior to issuance of a permit to install a new or replaced OWTS that is within a horizontal sanitary setback to the public well; or within 1,200 feet of an intake point for a surface water treatment plant for drinking water, 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, or if the OWTS is within a horizontal sanitary setback from a public well, to allow the water system owner to provide comments to EH.
- Any existing cesspool systems will be phased out/eliminated as they are encountered.
- On an annual basis, EH will collect data for and report in tabular spreadsheet format the following information. A copy of the report will be provided to the Lahontan RWQCB.
  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, EH 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 flowing 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.

OWTS Near Impaired Water Bodies

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

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. EH 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 tank by a licensed sewage hauler or elimination of wastewater flows to the failing OWTS. The notice of violation will also require a repair to be completed to the OWTS as needed within a reasonable time frame.
3. The proposed repair shall be evaluated by EH to ensure it meets the minimum design requirements of this LAMP or is in substantial conformance to the greatest extent practicable.
4. The repair shall be completed under permit and inspection by EH.
5. Failure to complete the required corrective action within the time frames given will result in additional enforcement action which may include condemnation of the structure for immediate health hazards.

Substandard Systems

All OWTS within Inyo 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