From: Louis Molina [mailto:lmolina@mono.ca.gov]
Sent: Friday, December 15, 2017 11:04 AM
To: Lahontan <RB6-Lahontan@waterboards.ca.gov>
Cc: Sandra Pearce <spearce@mono.ca.gov>; Jason Canger <jcanger@mono.ca.gov>
Subject: CW-825769

Mike-

Attached are 2 versions of our LAMP (MS Word and pdf). I've also included a copy of the checklist document. I am still in the process of working through comments/edits of the Implementing Ordinance, but I hope to have this document to you by early next week. Please let me know if you have any questions thus far with this document.

Thanks,
Louis

Louis Molina
Environmental Health Director
Mono County Health Department
P.O. Box 3329
Mammoth Lakes, CA 93546
(760) 924-1845(Mammoth Lakes)
(760) 932-5588 (Bridgeport)
lmolina@mono.ca.gov

Attachments
Final DRAFT 1 Mono County LAMP - December 2017.docx
LahontanLampChecklist Mono DRAFT 8-17.docx
Final DRAFT 1 Mono County LAMP - December 2017.pdf

OWTS Policy Section	OWTS Policy Section Summary	Region 6 Comments (These do not replace your review of OWTS Policy. *Italics* and websites are specific explanations, more detailed than in the Policy.)	Relevant LAMP Section	Local Agency Legal Authority/ Code Section
3.3	Annual Reporting	For Section 3.3 et seq, describe your program for annual reporting in a tabular spreadsheet format.	Section IX	MCC Sec. 14.04.070 (Reports) MCC Sec. 14.04.040 (Permits)
3.3.1	Complaints	Include numbers and locations of complaints, related investigations, and means of resolution.	Section IX	MCC Sec. 14.04.070 (B), Sec. 14.04.080 (A), Sec. 14.04.090, Sec. 14.04.100
3.3.2	OWTS Cleaning	Include applications and registrations issued as part of the local cleaning registration pursuant to California Health and Safety Code §117400 et seq.	Section VIII & IX	MCC Sec. 14.04.070
3.3.3	Permits for New and Replacement OWTS	Include numbers and locations of permits for new and replacement OWTS, and their Tiers.	Section IX	MCC Sec. 14.04.040
3.4	Permanent Records	Describe your program for permanently retaining records, and means of making them available to Water Board staff within 10 working days of a written request.	Section IX	N/A
3.5	Notifications to Municipal Water Suppliers	Describe your program for notifying public well and water intake owners, and the California Department of Public Health. Notification shall be as soon as practicable, but no later than 72 hours upon discovery of a failing OWTS, as described in Sections 11.1 and 11.2, within setbacks described in Sections 7.5.6 through 7.5.10.	Section II	MCC Sec. 14.04.040
9	Minimum OWTS Standards	This Section is an introduction; we require no specific LAMP Section citation here.	–	–
9.1	Considerations for LAMPs	For Section 9.1 et seq., describe your commitment to evaluate complaints, variances, failures, and inspections in Section 9.3.2 (Water Quality Assessment); and your proposed means of assessment to achieve this Policy's purpose of protecting water quality and human health.	Section I (Intro)	MCC Sec. 14.040.030

OWTS Policy Section	OWTS Policy Section Summary	Region 6 Comments (These do not replace your review of OWTS Policy. *Italics* and websites are specific explanations, more detailed than in the Policy.)	Relevant LAMP Section	Local Agency Legal Authority/ Code Section
9.1.1	Degree of vulnerability due to local hydrogeology	*Describe your commitment and means to identify* hydrogeologically vulnerable areas for Section 9.3.2., and discuss appropriate related siting restrictions and design criteria to protect water quality and public health. Qualified professionals ("Definitions," page 9 in the Policy) should identify hydrogeologically vulnerable areas. *We intend such professionals, where appropriate during a Water Quality Assessment, to generally consider locally reasonable percolation rates of least permeable relevant soil horizons, best available evidence of seasonally shallowest groundwater (including, but not limited to, soil mottling and gleying, static water levels of nearby wells and springs, and local drainage patterns), threats to receptors (supply wells and surface water), and potential geotechnical issues (including, but not limited to, potentially adverse dips of bedding, foliations, fractures in bedrock, and preferential pathways directly to groundwater).*	Section II, Section IV	MCC Sec. 14.04.030 (H)
9.1.2	High quality waters and other environmental conditions requiring enhanced protection	Describe special restrictions to meet water quality and public health goals pursuant to all federal, state, and local plans and orders. *Especially consider appropriate alternatives to those provided in Section 7.8, Allowable Average Density Requirements under Tier 1. See also: State Water Resources Control Board Resolution No. 68-16.*	Section IV – Supp. Treatment	MCC Sec. 14.04.030 (A)(4)
9.1.3	Shallow soils requiring non-standard dispersal systems	*We interpret "shallow" soils generally to mean thin soils overlying bedrock or highest seasonal groundwater. Dependent on threats to receptors, highest seasonal groundwater can locally include perched and intermittent saturated zones, as well as the shallowest local hydraulically unconfined aquifer unit. See Section 8.1.5 for Minimum Depths to Groundwater under Tier 1*. Qualified professionals should make appropriate determinations on the design and construction of non-standard dispersal systems due to shallow soils.	Section IV Alternative & Low Pressure OWTS	MCC 14.04.050 (B)(2), (3)

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9.1.4	High domestic well usage areas	*Our key potential concerns are nitrate and pathogen transport toward receptor wells, especially in areas with existing OWTS already prone to soft failures (OWTS failures not evident at grade). Appropriate qualified professionals should consider reasonable pollutant flow paths toward domestic wells, at minimum based on; publically available nitrate concentrations in local wells, published technical literature on local wastewater and non-wastewater nitrate sources, well constructions, pumping demands, and vulnerability of wells due to local hydrogeology. For pathogens, qualified professionals should ensure that field methods are sufficient to mitigate the potential for false positives.*	Section I, Section II, Section IV	MCC Sec. 14.04.050 (A)(1)
9.1.5	Fractured bedrock	*Where warranted, appropriate qualified professionals should assess permeability trends of water-bearing fractures, and related potential pathways of effluent toward receptors, including but not limited to, domestic wells and surface water. The professionals should also consider potential geotechnical issues. We suggest consideration of fractured bedrock in concert with percolation rates of overlying soils; either very high or low percolation rates might warrant siting restrictions or non-standard dispersal systems. See also State Water Resources Control Board Order WQ 2014-0153-DWQ, Attachment 1, page 1-3, Item A-3.*	Section I, Section IV	MCC Sec. 14.04.030, Sec. 14.04.040, Sec. 14.04.050, CPC
9.1.6	Poorly drained soils	*Appropriate qualified professionals should give criteria for determination of representative percolation rates, including but not limited to, general site evaluation, trench logging, pre-soak and measurement methods of percolation tests, and acceptable alternatives for percolation tests.*	Section IV	MCC Section 14.04.050

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9.1.7	Vulnerable surface water	*Our key potential concern is eutrophication of fresh surface water. While typically with relatively low mobility in groundwater and recently informally banned in dishwater detergents, phosphate is a common cause. At minimum, describe appropriate qualified professionals who will consider potential pathways of wastewater-sourced phosphate and other nutrients toward potentially threatened nearby surface bodies.*	Section I, Section II, Section IV	MCC Sec. 14.04.030, Sec. 14.04.050
9.1.8	Impaired water bodies	*<Check with Rob Tucker Tahoe staff for list of impaired water bodies and associated county>. See Attachment 2 of the OWTS Policy.*	Section II	MCC Sec. 14.04.050
9.1.9	High OWTS density areas	*Where nitrate is an identified chronic issue, at minimum, consider nitrogen loading per area; for example, see Hantzsche and Finnemore (1992), Crites and Tchobanoglous (1998), and more recent publications as appropriate.*	Section I, Section II, Section IV	MCC Sec. 14.04.030, Sec. 14.04.050
9.1.10	Limits to parcel size	At minimum, consider hydraulic mounding, nitrate and pathogen loading, and sufficiency of potential replacement areas.	Section II	MCC 14.04.050
9.1.11	areas with OWTS that predate adopted standards	Means multiple existing OWTS.	N/A	N/A
9.1.12	areas with OWTS either within prescriptive, Tier 1 setbacks, or within setbacks that a Local Agency finds appropriate	Means multiple existing OWTS.	Section II, Section III	MCC Sec. 14.04.060
9.2	Scope of Coverage:	For Section 9.2 et seq, provide details on scope of coverage, for example maximum authorized projected flows, allowable system types, and their related requirements for site evaluation, siting, and design and construction requirements.	Section I, Section II, Section III, Section IV, Section V	14.04 (Entirety)

OWTS Policy Section	OWTS Policy Section Summary	Region 6 Comments (These do not replace your review of OWTS Policy. *Italics* and websites are specific explanations, more detailed than in the Policy.)	Relevant LAMP Section	Local Agency Legal Authority/ Code Section
9.2.1	Installation and Inspection Permits	Permits generally cover procedures for inspections, maintenance and repair of OWTS, including assurances that such work on failing systems is under permit; see Tier 4.	Section III, Section IV, Section V, Section VII	MCC Sec. 14.04.040, Sec. 14.04.050, Sec. 14.04.060, Sec. 14.04.070
9.2.2	Special Provision Areas and Requirements near Impaired Water Bodies	*<Check with Rob Tucker Tahoe staff for list of impaired water body and associated county.> See Attachment 2 of the OWTS Policy.*	Section II, Section III, Section IV	MCC Sec. 14.04.030, Sec. 14.04.050
9.2.3	LAMP Variance Procedures	Variances for new installations and repairs should be in substantial conformance to the Policy, to the greatest extent practicable. Variances cannot authorize prohibited items in Section 9.4.	Section II, Section III, Sec. IV	MCC Sec. 14.04.050, Sec. 14.04.060
9.2.4	Qualifications for Persons who Work on OWTS	Qualifications generally cover requirements for education, training, and licensing. *We suggest that Local Agencies review information available from the California Onsite Waste Association (COWA) (link is provided below the table)*.	Section III, Section IV	MCC 14.04.020 (MM), (NN), (OO), (PP); Sec. 14.04.030 (F), (H); Sec. 14.04.070 (A), (B), (D)
9.2.5	Education and Outreach for OWTS Owners	Education and Outreach generally supports owners on locating, operating, and maintaining OWTS . At minimum, ensure that you will require OWTS designers and installers to provide owners with sufficient information to address critical maintenance, repairs, and parts replacements within 48 hours of failure; *see also Tier 4*. Also, provide information to appropriate volunteer groups. *At minimum, we suggest providing this information on your webpage.*	Section VI	N/A
9.2.6	Septage Disposal	Assess existing and proposed disposal locations, and their adequacy.	Section VIII	MCC Sec. 14.04.010, Sec. 14.04.070 (A)(2)(a)

OWTS Policy Section	OWTS Policy Section Summary	Region 6 Comments (These do not replace your review of OWTS Policy. *Italics* and websites are specific explanations, more detailed than in the Policy.)	Relevant LAMP Section	Local Agency Legal Authority/ Code Section
9.2.7	Maintenance Districts and Zones	*These generally refer to Homeowners Associations, special maintenance districts, and similar responsible entities. Requirements for responsible entities should generally reflect the Local Agency's judgment on minimum sizes of subdivisions that could potentially cause environmental impacts. LAMPs should ensure that responsible entities have the financial resources, stability, legal authority, and professional qualifications to operate community OWTS.*	N/A	N/A. No maintenance districts currently exist in Mono County for the maintenance of OWTS.
9.2.8	Regional Salt and Nutrient Management Plans	Consider development and implementation of, or coordination with, Regional Salt and Nutrient Management Plans; *see also State Board Resolution 2009-0011 (link is provided below this table)*	Not addressed.	If/when a Regional Salt and Nutrient Management Plan is appropriate for Mono County, MCEH will coordinate with the implementing agency as necessary.
9.2.9	Watershed Management Groups	Coordinate *with volunteer well monitoring programs* and similar watershed management groups.	Section IX	N/A
9.2.10	Proximity of Collection Systems to New or Replacement OWTS	Evaluate proximity of sewer systems to new and replacement OWTS. *See also Section 9.4.9.*	Section II, Section IV	MCC Sec. 14.04.030 (A)(1)
9.2.11	Public Water System Notification prior to permitting OWTS Installation or Repairs	Give your notification procedures to inform public water services of pending OWTS installations and repairs within prescribed setback distances.	Section II	N/A
9.2.12	Policies for Dispersal Areas within Setbacks of Public Wells and Surface Water Intakes	Discuss supplemental treatments; see Sections 10.9 and 10.10. A Local Agency can propose alternate criteria; *however we will need rationale in detail.*	Section II, Section IV (Supp. Treat.), Section V	MCC Sec. 14.04.030(A)(4)(c); Sec. 14.04.050(H), (I); Sec. 14.04.06 (A)(5)

OWTS Policy Section	OWTS Policy Section Summary	Region 6 Comments (These do not replace your review of OWTS Policy. *Italics* and websites are specific explanations, more detailed than in the Policy.)	Relevant LAMP Section	Local Agency Legal Authority/ Code Section
9.2.13	Cesspool Discontinuance and Phase-Out	Provide plans and schedule.	Section III – OWTS Aband. Stnd.	MCC Sec. 14.04.030 (D)(2)
9.3	Minimum Local Agency Management Responsibilities:	For Section 9.3 et seq, discuss minimum responsibilities for LAMP management. Responsibilities should generally cover data compilation, water quality assessment, follow-up on issues, and reporting to the Central Valley Water Board:	–	–
9.3.1	Permit Records, OWTS with Variances	Describe your records maintenance; numbers, locations, and descriptions of permits where you have granted variances.	Section IX – Report/Data	MCC 14.04.110 (C)
9.3.2	Water Quality Assessment Program:	In the Water Quality Assessment Program, generally focus on areas with characteristics covered in Section 9.1. Include monitoring and analysis of water quality data, complaints, variances, failures, and inspections. Also include appropriate monitoring for nitrate and pathogens; you can use information from other programs. *We will provide further guidance on reporting requirements. In the interim, to assist with analyses and evaluation reports (Section 9.3.3), we suggest posting data on appropriate maps; for example consider the links below this table.*	Section IX – Reporting/ Data (WQAP)	N/A

OWTS Policy Section	OWTS Policy Section Summary	Region 6 Comments (These do not replace your review of OWTS Policy. *Italics* and websites are specific explanations, more detailed than in the Policy.)	Relevant LAMP Section	Local Agency Legal Authority/ Code Section
9.3.2.1	Domestic Well Sampling	*Apply your best professional judgment to ensure that well sampling focuses on hydrogeologically reasonable pollutant (primarily nitrate) flow paths. A qualified professional should generally design an appropriate directed, judgmental, sample (i.e., statistically non-random). Of the links provided, the Geotracker GAMA website might be particularly useful to the professional; at minimum we suggest reviews of available nitrate data in relevant domestic wells, up-gradient, within, and down-gradient of an area of interest. For some instances, for example where a developer proposes a relatively large project, a Local Agency might require a special study to distinguish between wastewater and non-wastewater sourced nitrate. In such cases, we suggest your consideration of requiring focused sampling and analyses, for example of δ18O and δ15N of nitrate (Megan Young, USGS, 2014 pers comm), and the artificial sweeteners sucralose and acesulfame-K (Buerge et al 2009, Van Stempvoort et al 2011, and more recent publications as they become available).*	Section IX – Reporting/ Data	MCC Sec. 14.04.010 (A)
9.3.2.2	Domestic Well Sampling, Routine Real Estate Transfer Related	if those samples are routinely performed and reported.	Section IX – Reports/ Data	MCC Sec. 14.04.010 (A)
9.3.2.3	Water Quality of Public Water Systems	by you, or another municipality.	Section IX	MCC Sec. 14.04.010 (A)
9.3.2.4	Domestic Well Sampling, New Well Development	if those data are reported.	Section IX	MCC Sec. 14.04.010 (A)
9.3.2.5	Beach Water Quality Sampling, H&S Code §115885	*Public beaches include those on freshwater.*	N/A	N/A

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9.3.2.6	Receiving Water Sampling Related to NPDES Permits	*i.e., existing data from other monitoring programs*	Not Included	N/A
9.3.2.7	Data contained in California Water Quality Assessment Database	*i.e., existing data from other monitoring programs*	Section IX	MCC Sec. 14.04.010 (A)
9.3.2.8	Groundwater Sampling Related to Waste Discharge Requirements	i.e., existing data from other monitoring programs	Not Included	N/A
9.3.2.9	Groundwater Sampling Related to GAMA Program	i.e., existing data from other monitoring programs	Section IX	MCC Sec. 14.04.010 (A)
9.3.3	Annual Status Reports Covering 9.3.1-9.3.2	Reports are due February 1st, annually beginning one year after Regional Board approves LAMP. Every fifth year also include an evaluation report. Submit all groundwater monitoring data in Electronic Delivery Format (EDF) for Geotracker; submit all surface water data to CEDEN.	Section IX	N/A
9.4	Not Allowed or Authorized in LAMP:	For Section 9.4 et seq, ensure that your LAMP covers prohibitions.	_	_
9.4.1	Cesspools	of any kind or size.	Section II	MCC Sec. 14.04.030 (D)(2)
9.4.2	Projected Flow>10,000 gpd	*Apply professional judgment to further limit projected flows.*	Section I	N/A
9.4.3	Effluent Discharger Above Post-Installation Ground Surface	e.g., sprinklers, exposed drip lines, free-surface wetlands, and ponds.	Section IV - Prohibitions	MCC Section 14.04.030 (D)(6)

OWTS Policy Section	OWTS Policy Section Summary	Region 6 Comments (These do not replace your review of OWTS Policy. *Italics* and websites are specific explanations, more detailed than in the Policy.)	Relevant LAMP Section	Local Agency Legal Authority/ Code Section
9.4.4	Installation on Slopes >30% without Registered Professional's Report	*See also earlier comments, Section 9.1.1, regarding potential geotechnical concerns.*	Section II	MCC Sec. 14.04.030 (D)(4)
9.4.5	Decreased Leaching Area for IAPMO-Certified Dispersal System with Multiplier <0.70	IAPMO, International Association of Plumbing and Mechanical Officials. *Decreased leaching area refers to alternatives to conventional (stone-and-pipe) dispersal systems; these alternatives require relatively less area. The multiplier, <1, allows for a reduction in dispersal field area relative to a conventional system.*	Section II	MCC Sec. 14.04.110 (A) CPC Appendix H
9.4.6	Supplemental Treatments without Monitoring and Inspection	*Therefore, ensure that the LAMP describes periodic inspection and monitoring for OWTS with supplemental treatments.*	Section IV – Supp. Treatment	MCC Sec. 14.04.050 (H), (I)
9.4.7	Significant Wastes from RV Holding Tanks	*We interpret significant amounts to mean amounts greater than incidental dumping, such that volume, frequency, overall strength, or chemical additives preclude definition as domestic wastewater; see Definitions in OWTS Policy. See also, State Water Resources Control Board Order WQ 2014-0153-DWQ, Attachment B-2.*	Not Specifically Addressed – Not a Past Problem Issue	–
9.4.8	Encroachment Above Groundwater	Bottom of OWTS dispersal systems <2 feet above groundwater, or bottom of seepage pits <10 feet above groundwater. *We interpret groundwater to include inter-flow and perched zones, along with the shallowest main unconfined aquifer. Degree of vulnerability to pollution due to hydrogeological conditions, Section 9.1.1 and the Water Quality Assessment, Section 9.3.2. should cover in detail means of assessing seasonally shallowest depth to groundwater.*	Section II – Min. Depth to GW	MCC Sec. 14.04.050 (A)(1)(b)

OWTS Policy Section	OWTS Policy Section Summary	Region 6 Comments (These do not replace your review of OWTS Policy. *Italics* and websites are specific explanations, more detailed than in the Policy.)	Relevant LAMP Section	Local Agency Legal Authority/ Code Section
9.4.9	Installations Near Existing Sewers	OWTS Installations with public sewers <200 feet from building or exterior drainage facility (exception, connection fees + construction costs >2X replacement OWTS costs, and Local Agency determines no impairment to any drinking water.)	Section I, Section II	MCC Sec. 14.04.030 (A)(1)
9.4.10	Minimum Setbacks:	From public water systems.	–	–
9.4.10.1	From Public Supply Wells	If dispersal system <10' in depth, then >150' from public water supply well	Section II	MCC Sec. 14.04.050 (A)(1)(d)
9.4.10.2		If dispersal system >10' in depth, then >200' from public water supply well	Section II	MCC Sec. 14.04.050 (A)(1)(d)
9.4.10.3	From Public Supply Wells, Regarding Pathogens	If dispersal system > 20' in depth and <600' from public water supply well, then > distance for two-year travel time of microbiological contaminants, as determined by qualified professional. In no case <200'.	Not Addressed	N/A. A dispersal field greater than 20 feet in depth is unlikely to be approved.
9.4.10.4	From Public Surface Water Supplies	If dispersal system <1,200' from public water system's surface water intake, within drainage catchment, and potentially threatens intake, then >400' from high water mark of surface water body.	Section II	MCC Sec. 14.040050 (A)(1)(d); Sec. 14.04.110 (A)
9.4.10.5	From Public Surface Water Supplies	If dispersal system >1,200' <2,500' from public water system's surface water intake, within drainage catchment, and potentially threatens intake, then >200' from high water mark of surface water body.	Section II	MCC Sec. 14.04.050 (A)(1)(d); Sec. 14.04.110 (A)
9.4.11	Supplemental Treatments, Replacement OWTS That Do Not Meet Minimum Setback Requirements	Replacement OWTS shall meet minimum horizontal setbacks to the maximum extent practicable.	Section III	MCC Sec. 14.04.060 (A)(5), (6); Sec. 14.04.060 (D)(3)
9.4.12	Supplemental Treatments, New OWTS That Do Not Meet Minimum Setback Requirements	New OWTS shall meet minimum horizontal setbacks to the maximum extent practicable, and meet requirements for pathogens as specified in Section 10.8. and any other Local Agency's mitigation measures.	Section IV	MCC Sec. 14.04.050 (H)

OWTS Policy Section	OWTS Policy Section Summary	Region 6 Comments (These do not replace your review of OWTS Policy. *Italics* and websites are specific explanations, more detailed than in the Policy.)	Relevant LAMP Section	Local Agency Legal Authority/ Code Section
9.5	Technical Support of LAMP	Include adequate detail to ensure that the combination of all proposed criteria will protect water quality and public health sufficiently to warrant the Central Valley Water Board's waiver of Waste Discharge Requirements, pursuant to §13269, California Water Code.	Section I	N/A
9.6	Regional Water Quality Control Board Consideration of LAMP	Regional Boards shall consider past performance of local programs to protect water quality. *We will generally consider past performance based on our reviews of annual status and evaluation reports; see Section 9.3.3.*	N/A	N/A

Links

Section 9.2.5 Education and Outreach for OWTS Owners
http://www.cowa.org/
Section 9.2.8 Regional Salt and Nutrient Management Plans
http://www.waterboards.ca.gov/centralvalley/water_issues/salinity/laws_regs_policies/rw_policy_implementation_mem.pdf
Section 9.3.2 Water Quality Assessment Program
http://www.nrcs.usda.gov/wps/portal/nrcs/site/ca/home/
http://www.cdpr.ca.gov/docs/emon/grndwtr/gwpa_maps.htm
http://ngmdb.usgs.gov/maps/mapview/
http://www.conservation.ca.gov/cgs/information/publications/ms/Documents/MS58.pdf
http://www.water.ca.gov/groundwater/data_and_monitoring/northern_region/GroundwaterLevel/SacValGWContours/100t400_Wells_Spring-2013.pdf
http://www.water.ca.gov/waterdatalibrary/
http://www.waterboards.ca.gov/gama/docs/hva_map_table.pdf
http://geotracker.waterboards.ca.gov/gama/
http://msc.fema.gov/portal

References

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Crites, R and G. Tchobanoglous (1998), Small and Decentralized Wastewater Management Systems, McGraw-Hill, ISBN 0-07-289087-8, 1084 pages (see especially pages 919-920).

Young, Megan, USGS Menlo Park, mbyoung@usgs.gov , (650-329-4544)
Buerge, Ignaz J., Hans-Rudolf Buser, Maren Kahle, Markus D. Muller, and Thomas Poiger (2009), Ubiquitous occurrence of the artificial sweetener acesulfame in the aquatic environment: an ideal chemical marker of domestic wastewater in groundwater. "Environmental Science and Technology," 43" pages 4,381 to 4,385.

Van Stempvoort, Dale R., James W. Roy, Susan J. Brown, and Greg Bickerton (2011). Artificial sweeteners as potential tracers in groundwater in urban environments. "Journal of Hydrology," 401, pages 126 to 133.

MONO COUNTY
LOCAL AREA MANAGEMENT PROGRAM

SECTION I
INTRODUCTION

The Local Area Management Program (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 relevant regional water quality control board, in this case, the Lahontan Regional Water Quality Control Board, Victorville Branch (Lahontan Regional Water Board).

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 regulate or otherwise cover the following, which will require an individual waste discharge requirement, a waiver of individual waste discharge requirement, or other approval from the Lahontan Regional Water Board:

- 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;
- Projects utilizing package wastewater treatment plants with onsite disposal;
- Any OWTS with domestic waste peak flows that exceed 10,000 gallons per day; or
- Any other projects with the potential to result in water quality impacts that the Mono County Health Department, Environmental Health Division (MCEH) may refer to the Lahontan Regional Water Board for its review and approval.

MCEH has managed the OWTS program in Mono County for many decades. For conventional OWTS, permitting criteria has been based on the Water Quality Control Plan for the Lahontan Region (Lahontan Basin Plan), the California Plumbing Code (CPC), Appendix K, concepts from the USEPA Design Manual – Onsite Wastewater Treatment and Disposal Systems (EPA Manual), and some design concepts of the Manual of Septic Tank Practice published by the U.S. Department of Health, Education and Welfare (1975). Alternative and supplemental system designs are also in use in the County and these designs have been reviewed and approved by the Lahontan Regional Water Board. In addition, a Memorandum of Understanding (MOU)

between Mono County and the Lahontan Regional Water Board, established and signed in January 1989, is in effect and MCEH continues to adhere to its requirements.

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 lands owned by different agencies of the federal government or private land owned by the City of Los Angeles. As a 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 served by public sewers 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 system water wells, as well as from private water wells, have shown virtually no groundwater contamination in any community where OWTS are presently used in Mono County. Towards that purpose, this LAMP will maintain the "status quo" wherever possible, while striving to incorporate the new requirements of the OTWS Policy.

In June 2012, the SWRCB adopted the OWTS Policy and it became effective in May of 2013. For the first time, it established a statewide, risk-based tiered approach for the regulation and management of OWTS. Please see Appendix (XX) to review the complete text of the Policy. The OWTS Policy regulates OTWSs pursuant to the classification within one of four different tiers. Tier 0 sets regulatory standards for existing OWTS which are functioning properly and require no changes. Tier 1 establishes minimum standards for low risk new or replacement OWTS. Tier 2, once approved by the appropriate regional water quality control board, allows local agencies to develop customized management programs that address the conditions specific to that jurisdiction. This customized management program is the LAMP. Once approved, the standards contained in a LAMP supersede the Tier 1 standards. Tier 3 applies special, enhanced standards to both new and existing OWTS that are located near waterbodies listed as impaired due to nitrogen or pathogens, pursuant to Section 303(d) of the Clean Water Act. The final tier, Tier 4, is for those OWTS that are presently failing and require corrective action.

In addition to the LAMP, the County has produced its Implementing Ordinance, which will function in conjunction with the LAMP, to establish OWTS policies, procedures, and requirements governing the OWTS Program in the County. A complete copy of the Implementing Ordinance is attached hereto as Appendix XX. This LAMP conforms to all of the applicable Tier 2 criteria listed in Section 9 of the OTWS Policy, including the prohibitions contained in Section 9.4. MCEH acknowledges that the Tier 1 standards afford an essential level of public health and water quality protection. Accordingly, the County's LAMP and Implementing Ordinance incorporate many Tier 1 standards. Further, while this LAMP does not require regulatory oversight for regular maintenance of conventional systems, it does require all non-conventional types of OWTS to obtain operating permits that include provisions that require regular maintenance and reporting. Finally, the provisions of this LAMP shall apply to all

unincorporated areas of Mono County where a sewer system is not available, including all public lands located in Mono County. It also applies to a small portion of public lands in Madera County within the San Joaquin River drainage in the Red's Meadow area, per an MOU between Mono County and Madera County. This MOU is attached hereto as Appendix XX. It does not apply to the incorporated Town of Mammoth Lakes, which is served by the Mammoth Community Water District, or any unincorporated area where a sewer system is available.

While every effort was made to make this LAMP comprehensive, MCEH anticipates that it will be necessary to modify this LAMP in the future. This opportunity is built into the OWTS Policy in Section 9.3.3, which requires a complete evaluation of the LAMP every five (5) years to determine its efficacy in meeting water quality objectives with respect to impacts from OWTS. Modifications may also be necessary as technology, conditions, and experience improve and change over time. Any proposed changes will be made only after consultation and approval of the Lahontan Regional Water Quality Control Board and the Mono County Board of Supervisors.

SECTION II
GENERAL POLICY RECOMMENDATION AND PROVISIONS

Any structure, regardless of use, that produces wastewater shall have an adequate wastewater treatment and dispersal system. Unless otherwise specified in this LAMP, the following criteria shall apply for the construction of OWTS in Mono County, unless otherwise specified in this LAMP.

- When a public sewer is available within 200 feet of a structure producing wastewater, the structure must connect to the public sewer.
- Chemical, portable toilets are acceptable for temporary use and during special events. Portable toilets are not acceptable for permanent use.
- Composting, solar, incinerating or other unconventional toilets shall not be installed in any permanent structure unless a standard toilet, attached to a permitted OWTS, is also available within the same structure.
- Holding tanks are not acceptable for wastewater disposal for residential use in lieu of a permitted OWTS.
- 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 minutes per inch (MPI) there shall exist a soil thickness layer of not less than 5 feet from the bottom of the disposal area to groundwater or to 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, or other types of non-convention OWTS approved by the Lahontan Regional Water Board.
- The average density for any new subdivision of property made by tentative approval pursuant to the Subdivision Map Act, where OWTS will be utilized for onsite sewage

disposal, and where the subdivision occurs after the effective date of the OWTS Policy and implementation of this LAMP, shall not exceed two equivalent dwelling units per acre (2 EDU/acre), or its equivalent.

- Lots within existing subdivisions in Mono County, created prior to the effective date of this LAMP, shall not be required to meet the maximum 2 EDU/acre requirement. Undeveloped lots in these existing subdivisions will be issued OWTS permits and held to the requirements outlined in the LAMP, to the greatest extent possible, for all criteria with the exception to density.

  (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 2 EDU/acre *for new developments. Historic records indicate that communities served by onsite wastewater disposal systems in Mono County show little indication of degradation of groundwater aquifer quality due to OWTS. Mono County has a population of just 15,000 people over the 3,000 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/acre *for new development has proven more than adequate in protecting human health and groundwater quality. For existing developments, OWTS densities should meet the new development standard, specified 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 H of the CPC. Accordingly, for gravel-less chamber systems, no sidewall credit is given, only trench bottom area. However, for these systems, a 0.7 factor/credit of the rock and perforated pipe system infiltrative area requirements is allowed.
- Ground slope in the disposal area shall not be greater than 30%.
- New cesspools and seepage pits will not be approved for use in Mono County. Where a seepage pit is presently being used 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. Cesspools, when discovered, will be required to be abandoned and replaced with an approved OWTS.
- For existing undeveloped lots and replacement systems, the standards stipulated in this LAMP for new OWTS shall be required wherever possible. Where existing physical constraints will not allow this, new OTWS 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.
- Horizontal setbacks shall adhere to the requirements set forth in the most recent addition of the CPC, or the Mono County Code, whichever is greater.

Residential disposal fields for single-family-homes will be sized based on wastewater flows of 150 gallons per day (gpd) per bedroom, which assumes an occupancy of 2 persons per bedroom. This conservative calculation criteria (relatively high wastewater flows) will help to assure adequate leach field sizing. Leach field sizing will be calculated based on the appropriate application rate, in gallons per square foot per day (g/sf/d), for the soil characteristics observed on site. Application rates for various soils are derived from the most recent edition of the USEPA Manual. Septic tank minimum capacity will be determined using sizing criteria from the most recent edition of the California Plumbing Code (CPC).

Commercial disposal field designs shall be determined by peak waste flows for the specific occupancy designations listed in the most recent edition of the CPC. Septic tank minimum capacity will likewise be required to meet CPC criteria. Commercial operations that produce greater than 500 gpd per acre will require supplemental treatment.

Provisions of this LAMP and the Implementing Ordinance apply to wastewater flows of 10,000 gpd or less. Projects with flows calculated to exceed 10,000 gpd will be referred to the Lahontan Regional Water Board for review and approval.

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 of that water source. The owner/operator of a public water system, or SWRCB if the owner of the system cannot be identified, will be notified of a pending permit and subsequent construction of an OWTS 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 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 failing 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

Currently, there are no water bodies in Mono County listed on Attachment 2 of the OWTS Policy. If and when a water body in Mono County is subject to being listed on Attachment 2 because it has been listed as impaired under Section 303(d) of the Clean Water Act, MCEH will follow the applicable specific requirements found in Tier 3 of the OWTS Policy, or develop an Advanced Protection Management Program (APMP), approved by the Lahontan Regional Water Board, for the impaired water body. This LAMP will require an APMP for any newly proposed development in all Tier 3 – Impaired Areas listed in Attachment 2 of the OWTS Policy and will require appropriate supplemental treatment systems (STS) within those areas.

Twin Lakes Subdivision

Although not listed on Attachment 2 of the OWTW Policy, Upper Twin Lakes, near Bridgeport, has been identified as having elevated nitrate levels. At present, the Twin Lakes Subdivision is at build-out based on the current Basin Plan density requirement of no more than 2 EDU/acre. Unlike other existing subdivisions in Mono County that received exemptions from the Lahontan Regional Water Board for higher densities, the Twin Lakes Subdivision received no exemption. Upon the effective date of this LAMP, the maximum density exemptions granted by the Lahontan Regional Water Board, for existing subdivisions in Mono County that exceed the 2 EDU/acre, will no longer be valid. Instead, the provisions and requirements outlined in this LAMP and its Implementing Ordinance will take effect.

The Twin Lakes Subdivision is approximately 100 acres in area. To date, 200 OWTS permits have been issued which leaves approximately 60 lots that cannot currently be built upon due to the maximum density requirement in the Lahontan Basin Plan. Upon the effective date of this LAMP, a portion of those remaining 60 lots may be developed provided that horizontal setback requirements set forth in this document can be met. In addition, this LAMP will require Tier 3 construction and monitoring requirements for all new OWTS on the remaining undeveloped lots within the Twin Lakes Subdivision, as well as for replacement OWTS to be located on developed lots, when deemed necessary, under the following conditions:

1. All new and replacement OWTS shall incorporate STS with designs certified by the National Sanitation Foundation (NSF), or another approved third-party tester, and be approved by the Lahontan Regional Water Board, so as to ensure that nitrate concentrations in OWTS effluent are reduced by 50% or greater.

2. STS shall be designed by a licensed civil engineer. The engineer shall design an STS for the specific lot or parcel where the STS will be installed. The engineer shall prepare a report that identifies all components of the STS and submit that report to MCEH along with the OWTS permit application.

3. Setbacks for all new and replacement Tier 3 - OWTS shall meet the same criteria set forth in the LAMP for Tier 2 - OWTS.

4. A routine inspection and maintenance program for all STS in the Twin Lakes subdivision shall be developed and implemented by the Twin Lakes Subdivision homeowners' governing body.

5. An APMP shall be developed by MCEH for the Twin Lakes Subdivision if, in the future, Upper Twin Lakes is listed in Attachment 2 of the OWTS Policy.

SECTION III
REQUIREMENTS FOR EXISTING OWTS

Existing Functioning OWTS

Consistent with the criteria outlined in Tier 0 of the OWTS Policy, systems that are functioning properly will not be affected by this LAMP for as long as they continue to function properly. Nevertheless, regular inspection and maintenance is necessary to ensure that an OWTS continues to operate satisfactorily and to extend the life of the system. OWTS that fail will be repaired consistent with the criteria outlined in Tier 4 of the OWTS Policy and MCEH standards.

The Mono County Code has an effective voluntary maintenance and mandatory reporting program for standard OWTS. Although the ordinance does not require routine maintenance, it does stipulate that whenever and OWTS is serviced, the system is to be inspected and a written report is to be completed and submitted to the MCEH.

Further, under the Implementing Ordinance, whenever an OWTS is serviced it must be serviced and inspected by a Qualified Inspector. A Qualified Inspector means a Registered Environmental Health Specialist, Professional Engineer, Qualified Contractor, or others deemed to have professional knowledge and experience to evaluate an OWTS, such as a Registered Pumper Company employee who has received proper training. The Qualified Inspector shall inspect the septic tank and look for signs of deterioration, corrosion and that all components of the tank are in place and functioning. In addition, the Qualified Inspector shall look for evidence that the dispersal field has failed or is in the process of failing. The Qualified Inspector shall prepare a written report that includes the property owner's name and site address, a description of the type of OWTS, and any deficiencies noted during the inspection. The report must be submitted to MCEH within 30 days of the date of servicing and inspection. A copy of the

inspection form is attached hereto as Appendix XX. In cases where an OWTS has been determined to be failing, the Qualified Inspector must submit a report to MCEH within 24 hours. Once the report is received by MCEH, the report will be reviewed, and appropriate corrective action will be initiated. All reports will be uploaded to the MCEH database with inspection findings.

Failing and Failed OWTS

When an OWTS has failed or is found to be failing by either a Qualified Inspector, MCEH staff, or other means, appropriate mitigation measures may be required, which may include repeated pumping of the septic tank to eliminate further sewage discharges. Subsequently, the failing OWTS will be required to be repaired as soon as practicable by a Qualified Contractor and must meet current standards. A conventional OWTS may be repaired by the homeowner.

When it is determined that a system is failing or has failed and MCEH has a permit on record, the replacement dispersal field will be required to be the same type and size, or larger. Replacement or repairs of OWTS shall be in conformance with Tier 4 standards of the OWTS Policy and shall meet requirements of the Implementing Ordinance. If site conditions preclude the installation of a new dispersal field that meets required standards, supplemental treatment will be required, if deemed necessary, to provide treatment equivalent to the required standards.

All repairs or modifications to an OWTS require an approved permit from MCEH.

OWTS in Degraded Basins

If the Lahontan Regional Water Board identifies a groundwater basin in the County where use of OWTS is causing or contributing to an exceedance of nitrate or pathogen maximum contaminant levels, the County will develop an APMP following consultation and approval by the Lahontan Regional Water Board. The APMP shall provide the same level of protection as the Tier 3 standards in the OWTS Policy and may include additional regulatory requirements including but not be limited to: (i) supplemental treatment for all new and replacement systems; (ii) mandatory, routine inspections, and maintenance; (iii) shallow ground water monitoring; (iv) connection to a public sewer if one exists; (v) or other appropriate actions.

Onsite Wastewater Treatment System Evaluation/Modification

Existing functioning OWTS that would otherwise be expected to continue to function properly may become overtaxed when homes are remodeled or expanded in a manner that increases the sewage flow or changes the characteristics of the sewage generated. When a building remodel results in a potential increase in wastewater flow, the OWTS shall be evaluated by MCEH. If MCEH determines that the current OWTS is not sized to accept the additional wastewater flow, then MCEH will require appropriate modification to the OWTS will be required. Examples of changes that would result in an increased flow to the system include the addition of a bedroom, increased number of occupants, or installation of a fixture or device that would increase the average daily wastewater flow to the OWTS.

Additionally, improvements on the property that encroach on the OWTS or its designated expansion area would trigger the need for review and evaluation by MCEH. If it is determined that a remodel or improvement to a property presents no impact to the OWTS or that the existing system design and sizing is adequate, then no modification to the OWTS will be required.

OWTS Abandonment Standards

Unless properly abandoned, an OWTS no longer in use represents a safety hazard. The top or lids of the septic tank may deteriorate and collapse over time. Therefore, MCEH will ensure that septic tanks and other components of the OWTS are properly abandoned.

An existing OWTS or a portion thereof shall be properly abandoned, under the following conditions:

- Upon the discovery of a hollow seepage pit or cesspool;
- When the structure is connected to a public sewer; or
- When the structure served by the OWTS is demolished unless the owner demonstrates their intention to use the system in the future.

Standards for abandonment of a septic tank include:

- The tank shall be pumped to remove all contents;
- The tank will then be removed entirely and transported to a landfill for disposal, unless MCEH approves abandoning the tank in place; and
- If abandoned in place, the top of the tank shall be removed or crushed, the bottom of the tank punctured or cracked to allow drainage through the tank, and the tank then filled with clean soil or approved fill material.

Standards for abandonment of a dispersal field include:

- Seepage pits shall be excavated to a depth of 2 feet below grade and the center pipe cut. The center pipe and the excavation shall then be backfilled with clean soil or other fill material approved by MCEH.
- Standard leach lines composed of perforated pipe and gravel may be abandoned in place when MCEH determines that doing so will not negatively impact future development.
- If hollow chambers are used, also called a chamber system, the chambers shall be removed and the trench backfilled. In some cases, a chamber system may be abandoned in place with MCEH approval.

SECTION IV
REQUIREMENTS OF NEW OWTS

MCEH review of new OWTS will occur on two levels. An initial review to verify OWTS feasibility occurs as part of the discretionary review process for proposals to create new lots through the Mono County Community Development Department (MCCDD) procedures. A second, more detailed review occurs when an application to construct an OWTS is submitted to MCEH. The issuance of a permit to construct an OWTS is a ministerial process.

The initial, discretionary review is performed by MCEH staff working in the Land Use Program. The role of the Land Use Program staff is to review projects within the unincorporated portions of Mono County to ensure conformity with state and local regulations and policies enforced by MCEH. These projects may involve a number of programs overseen by MCEH, including retail food, recreational health, solid waste, drinking water, and other programs, and, for the purposes of this LAMP, sewage or wastewater dispersal.

For projects that involve subdivisions, development plans, and conditional use permits, a determination must be made as to whether adequate public water and sewer services are available. If such services are available, MCEH will make it a condition of project approval that the applicant obtain approvals from the public water and sewer agencies and connect to these systems. For those projects where public water or sewer services are not available and a private water well and/or use of an OWTS is proposed, MCEH reviews well and soil test data to confirm their feasibility for the proposed project.

MCEH shall determine OWTS feasibility by reviewing the proposed site conditions and the preliminary engineering and layout of the system to ensure that adequate disposal area for both the primary and 100% expansion area exists. Appropriate setbacks to property lines, existing structures, water courses, water wells and other features are also reviewed. A minimum of 2 soil profiles and 2 percolation tests are also required for each proposed lot. In cases where uniform soil conditions are anticipated or are discovered through this process, the number of soil profiles and/or percolation tests may be reduced with MCEH approval. Soil profiles are required in the area of the proposed disposal field in order to determine the long-term suitability of the soils to accept wastewater. In most cases, MCEH will visit the site to confirm the accuracy of the map and the location of any limiting features of the property.

If upon review MCEH finds that the proposed project site is unsuitable for wastewater treatment and dispersal, then the project cannot move forward unless a suitable site is identified. For projects proposed in areas known to be problematic for use of OWTS, MCEH will apply strategies to address those specific conditions and to mitigate impacts to surface water or groundwater. Additionally, if an OWTS is inadequate or inappropriate for a proposed project, MCEH will communicate this determination to the project applicant and MCCDD during the Land Use Program's review process.

The standards for new OWTS, as well as specific siting, design and construction criteria are contained in the Implementing Ordinance, which outlines general provisions for the repair, upgrade, modification or abandonment of existing systems. Tier 1 standards of the OWTS Policy apply unless otherwise specifically addressed in the Implementing Ordinance.

Protection of OWTS

All OWTS require regular maintenance to ensure that they are operating as designed and to prolong the useful life of the system. This is especially true for alternative systems and those that utilize supplemental treatment. In order to facilitate inspection and maintenance, OWTS components must be accessible.

In most OWTS designs, a 100% expansion area must be identified and set aside for future dispersal field use. Development in this expansion area that would preclude its future use as a dispersal field will not be allowed.

Prohibitions

The LAMP and the Implementing Ordinance will continue to administer current MCEH policies and implement the following prohibitions and requirements:

- The use of seepage pits and cesspools for sewage dispersal is prohibited.
- The use of holding tanks as a permanent means of wastewater management is prohibited.
- Sewage dispersal in fill material, unless the material is engineered fill designed for that purpose, is prohibited.
- A discharge to an OWTS that exceeds peek design flow or maximum permitted capacity is prohibited.
- No OWTS shall 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.

Professional Qualifications

To ensure performance that is consistent with the goals and objectives of this LAMP, OWTS must be sited, designed and constructed properly. Once placed into operation, regular inspection and maintenance are necessary to keep the system functioning as designed and to prolong its useful life. Therefore, specific qualifications and licenses necessary to design, construct maintain and/or repair an OWTS in Mono County include:

- Soil evaluations must be performed by a Registered Civil Engineer, Registered Geologist, Certified Soil Scientist, or Registered Environmental Health Specialist (REHS).
- OWTS must be designed by a Qualified Professional, such as a Professional Engineer, Professional Geologist or REHS.
- Construction, modification, repair and abandonment of an OWTS must be performed by a Qualified Contractor. A Qualified Contractor is a California State License Board (CSLB) licensed contractor who possesses an "A", C-42 or C36 license. A contractor who possesses a "B" license may construct an OWTS associated with a building project, provided that he is performing 3 or more building trades on that project.
- Inspections, maintenance and servicing must be performed by a Qualified Inspector or a Qualified Contractor. "Qualified Inspector" means a Registered Environmental Health Specialist, Professional Engineer, Qualified Contractor, or an individual that meets the requirements of the State OWTS Policy.

Site/Soil Evaluation

A general site evaluation must be completed that will assess topographical features of the lot, setbacks to water courses or water bodies, as well as distances to neighboring wells, neighboring OWTS and other surface features.

A soil evaluation will be required for all newly created lots prior to issuance of an OWTS permit. In most cases, this soil evaluation will include soil profiles to determine the depth and quality of soil and to assure minimum separation to groundwater or to bedrock or another confining zone. Percolation tests will also be required on newly created lots to determine wastewater acceptability of the soil and the appropriate application rate to use in the OWTS design. Soil profiles are required in the area of the proposed primary dispersal field, as well as in the expansion field. Soil profiles and percolation tests should be conducted in the spring and early summer months when anticipated groundwater is at its highest level (shallowest soil depth).

MCEH may waive the requirement for soil profiles and/or percolation tests in some developments, on existing lots, where ample data exists of the soil characteristics in the area and where soil condition have been shown to be relatively uniform throughout the development. MCEH will make this determination on a case by case basis.

Tank Requirements

The construction standards and sizing criteria for septic and treatment or pump basin tanks must be consistent with standards contained in state regulations and adopted documents. As stipulated in the California Plumbing Code (CPC), all tanks are to be watertight and constructed of durable, corrosion resistant material such as reinforced concrete or approved plastics and must conform to International Association of Plumbing and Mechanical Officials (IAPMO), National Sanitation Foundation (NSF) or the American Society for Testing and Material (ASTM) standards.

If an OWTS design calls for placing a tank beneath areas subject to vehicular traffic, such as a driveway, the tank, risers and manhole covers must be traffic rated.

Septic tanks must have a minimum of 2 compartments and a minimum capacity and size based on criteria stated in the latest edition of the CPC. Each compartment shall be accessible through a manway or port that is a minimum of 20 inches in diameter.

In general, all tanks should be buried as shallow as practicable, with a minimum cover of 6 inches. When site conditions warrant a tank being buried deeper than 12 inches below grade, each compartment opening is to be fitted with a watertight riser that extends to within 12 inches of grade, or to grade whenever practicable. When risers are required and extend to finish grade, corrosion and tamper resistant fasteners shall be used to secure the riser lids.

A minimum separation of 5 feet is required between structures, patios and decks so that all tank lids are accessible for tank inspection, servicing and maintenance.

Dispersal Fields

Dispersal fields will be constructed based on the calculated area needed to treat sewage produced from a proposed or existing residence or structure. Additional area shall be identified and set aside for a future OWTS dispersal field that is equal to the area of the original dispersal field, otherwise known as 100% replacement or expansion area. This expansion area will be used when the original dispersal field no longer functions adequately.

Standard/Conventional Leach Line Construction

Leach lines are the preferred method of OWTS effluent dispersal. Leach trenches that consist of either perforated PVC pipe installed over a layer of leach rock, or chamber system leach lines, are considered a standard or conventional dispersal field. Conventional leach lines are preferred over other types of dispersal fields for several reasons. Shallow conventional trenches allow for better dispersal by means of both percolation of liquid waste downward and evaporation of liquid upward. Soil microbes that break down or utilize the effluent are more numerous at shallow soil depth and can more effectively treat OWTS effluent. Furthermore, nitrogen, an important contaminant associated with sewage, is readily available for uptake by plants at shallower soil depth, thus minimizing the influence of nitrogen containing contaminants on groundwater reserves in the area.

In a standard rock and perforated pipe system, leach line trenches are to be constructed to a minimum width of 18 inches, to a maximum of 36 inches. The depth of the trenches will vary dependent on design. The depth of leach rock beneath the perforated pipe will vary between 1 foot minimum and 3 feet maximum. The perforated pipe will be covered with a minimum of 2 inches of leach rock, with the rock and pipe covered with filter fabric prior to backfill. A minimum of 12 inches (18 inches is preferred) of earth cover shall then be applied.

When a chamber system leach field is installed, trenches shall be wide enough to accommodate the width of the chambers used. No leach rock is required for standard installations. Instead, the chambers shall be placed directly on the bottom of the trench. The chambers shall be covered with a layer of untreated filter fabric and then backfilled with earth cover to a minimum depth of 1 foot.

For rock and pipe systems and for chamber systems, trenches shall be constructed on contour (if a slope exists) and trench bottoms shall be level. In most cases where more than a single leach line is to be installed, a distribution box shall be installed between the septic tank and dispersal field. This will help to ensure even distribution of effluent to the leach lines. A distribution box shall be installed at least 5 feet from the septic tank, as well as 5 feet from the dispersal field. The distribution box shall be set onto a concrete pad on compacted earth, or set in concrete mixed on site, to eliminate the settling of the distribution box upon backfilling.

To facilitate future inspections of the dispersal field, inspection ports (or viewing ports) shall be installed at the end of each leach trench. If warranted, inspection ports may be required elsewhere in the leach field dependent upon site conditions.

Low Pressure Distribution

The preferred method of wastewater dispersal is by gravity flow. However, when site conditions preclude gravity distribution, effluent may be distributed to a disposal field under pressure. Pressure distribution systems must be designed by a Qualified Professional.

Alternative OWTS

Alternative OWTS utilize dispersal fields consisting of components other than a conventional or supplemental treatment system, such as a mound, at-grade, and evapo-transpiration systems.

Alternative OWTS must be designed by a Qualified Professional in conformance with state guidelines. MCEH has received approval from the Lahontan Regional Water Board for various Alternative OWTS designs that can be used in Mono County. Other Alternative OWTS could be approved in the future following approval by the Lahontan Regional Water Board.

Prior to final approval, the property owner shall record a notice stating that an Alternative OWTS has been installed on the property. This "Notice to Property Owner" shall run with the land and will act as a notice to any future property owner that the property is served by an Alternative OWTS and is therefore subject to an operating permit and regular maintenance, monitoring, and reporting requirements. A copy of the recorded document shall be provided to MCEH before final OWTS approval will be given.

To ensure that the Alternative OWTS continues to function properly, it will need to be inspected by a Qualified Inspector at least annually or as otherwise approved by MCEH. Inspection reports shall be submitted to MCEH detailing the findings of the inspection. These reports shall be submitted within 30 days of the inspection.

Supplemental Treatment

Due to site conditions or due to water quality objectives specific to a particular site, some OWTS will require supplemental treatment prior to discharging of effluent to a dispersal field. STS include processes that can effectively reduce wastewater constituents such as Total Suspended Solids (TSS), Bio-chemical Oxygen Demand (BOD) and Total Nitrogen (TN). All STS will require plan review and approval from MCEH prior to installation. All STS must be tested and certified by an independent testing organization, such as NSF, with the testing standard(s) specific to the contaminant(s) of interest. All STS designs for use in Mono County must be approved by the Lahontan Regional Water Board.

All STS owners shall be provided with an informational maintenance or replacement document by the system designer or installer. This document shall specify homeowner procedures to ensure maintenance, repair or replacement of critical items within 48 hours following failure. A copy of these documents shall be maintained at the site and shall be available to the qualified service provider.

An STS shall be equipped with a visual and audible alarm that alerts the owner if the system malfunctions. 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. If upon inspection the system is determined to be failing, then the report must be submitted within 24 hours.

Because supplemental treatment is provided as a mitigation factor, every STS must receive regular maintenance, by a qualified technician who has been trained in the operation and maintenance of the specific STS design, to ensure that it is operating as designed. MCEH requires that a maintenance contract be signed and in place prior to installation of the system. This agreement is to remain in force for the life of the STS.

Prior to final approval of the installation of a STS, a Notice of Installation of the Supplemental Treatment System shall be recorded with the Mono County Clerk-Recorder's Office. This document shall run with the land and shall serve as constructive notice to all future owners that the property is served by an OWTS that utilizes supplemental treatment and is subject to an operating permit as well as maintenance, monitoring, and reporting requirements. A copy of the recorded document shall be provided to MCEH.

Operating Permits

Operating permits will be required for OWTS that utilize an Alternative OWTS or a STS to ensure that they are functioning properly and as designed. Permit conditions will require regular inspections of the system by a Qualified Inspector or a trained manufacturer's representative. In addition, a report detailing the findings of the inspection must be submitted to MCEH within 30 days of the date of servicing and inspection. In cases where an OWTS has been determined to be failing, the Qualified Inspector must submit a report to the MCEH within 24 hours.
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SECTION V
ALTERNATIVE MEANS OF WASTEWATER DISPOSAL FOLLOWING OWTS FAILURE OR GROUNDWATER DEGRADATION

OWTS must be located, designed, installed and operated in accordance with state and County standards. Systems built to these standards should last decades if they are properly maintained and regularly serviced. However, even a properly maintained OWTS has a finite lifespan and will eventually fail and require repair. When repairs are necessary, it is the general policy to upgrade the system to the standards in effect at the time of failure, to the greatest extent feasible.

There are a number of developments in Mono County that have residences with OWTS that do not conform to current state and County standards implemented by MCEH. Factors that make these existing OWTS nonconforming include:

- Inadequate area available for the dispersal field and/or expansion area;
- Inadequate setback from drainages or watercourses;
- Inadequate setback from steep slopes; and/or
- Inadequate vertical separation from groundwater or an impervious subsurface layer.

When an existing, nonconforming OWTS fails, it is often not possible to make repairs that meet all current standards. In these cases, replacement OWTS will be constructed to meet current standards to the greatest extent possible. However, in no case will a permit be issued for a replacement OWTS where the system will pose an imminent health risk or hazard, or a threat to groundwater or surface water, unless the threat can be mitigated to adequately protect public health and the environment. Mitigation may include replacement of a failing system with an Alternative OWTS or an OWTS that incorporates supplemental treatment.

SECTION VI
EDUCATION AND OUTREACH

The primary method of education and outreach is by direct interaction between MCEH staff and the public. Staff routinely receives and responds to phone calls, email and office visits by private property owners, consultants and contractors with questions about the regulations, site specific requirements and/or the permit process. MCEH also regularly participates in Land Use Technical Advisory Committee meetings and provides information to property owners and their consultants on new development that will involve the use an OWTS. As necessary, MCEH staff will also brief the Board of Supervisors or the Planning Commission on onsite wastewater issues regarding proposed developments and projects.

MCEH also maintains a county website where all OWTS permit application forms and instructions are available. In addition to forms, MCEH posts or provides links to various regulatory information and documents related to OWTS and to Mono County's LAMP and OWTS Ordinance. The website also provides general information about proper OWTS maintenance.

Stakeholder or community meetings will be conducted as outreach efforts for significant or important projects such as writing or implementation of new regulations, such as this LAMP.

SECTION VII
ENFORCEMENT

The County's OWTS Ordinance includes provisions and procedures to enforce state and County wastewater disposal laws and ensure protection of the public health and the environment. In general, enforcement actions are limited to situations where all other means to correct a problem or an ongoing violation have been exhausted. In situations where an imminent threat to public health or the environment exists, appropriate enforcement action will be initiated immediately. Circumstances or conditions that would result in MCEH initiating enforcement action are described below.

Failure to Obtain a Permit

Under the County's OWTS Ordinance, a permit is required to construct, repair, modify, or abandon an OWTS. It is unlawful to cover, conceal, or put into use an OWTS without having first obtained an inspection and final approval from MCEH. When MCEH staff discover, or are made aware of the fact that an OWTS is being installed, modified, repaired, or abandoned without a permit, and the work is in progress, MCEH will issue a Notice of Violation to the property owner ordering him to cease further work. The Notice of Violation and order shall require the property owner to submit a permit application with the appropriate permit fee, the applicable penalty, and any other required information to MCEH. The Notice of Violation and order shall prohibit all work on the OWTS from recommencing until MCEH has issued a permit.

An OWTS that was installed, modified, repaired, or abandoned without a permit and inspection has no legal standing. When these situations are discovered, the property owner will be required to submit an application to construct an OWTS "after-the-fact", and submit documents and photographs to identify what activities were conducted or what components were installed. When appropriate, components of the OWTS may be required to be uncovered to show evidence of what was installed. If inadequate information is available and/or field investigation cannot confirm the finished construction of the OWTS, a permit will not be issued for the unlawful OWTS and reconstruction under a new OWTS permit will be required.

Inspection and Maintenance

The County does not require ongoing, routine inspections of standard OWTS or systems not required to have a permit to operate. However, voluntary inspection and maintenance is encouraged. The County requires that any time an OWTS is serviced, the tank is to be inspected by a Qualified Inspector for signs of deterioration and other system deficiencies. In addition, a report detailing the results of the inspection must be submitted to MCEH within 30 days. If upon inspection the system is determined to be failing, the report must be submitted within 24 hours.

Once the report is received it will be reviewed by MCEH staff. If the report identifies any deficiencies, a tiered enforcement response is implemented. Initially, a notice is generated and mailed to the property owner. The notice will describe corrective action to be taken and direct that appropriate repair of the OWTS be completed by a specified date. If the property owner

makes the needed repairs, then MCEH shall not take further action. If the property owner fails to take corrective action, then a process of increasing enforcement action will be taken until the problem is resolved. This progressive enforcement process includes the initial notice, followed by a Notice of Violation, and finally formal legal action that may include penalties and fines.

The goal of an enforcement action is to correct a violation. The assessment of a fine does not end the matter as abatement of the violation is still required. This would be handled by increased enforcement action including additional fines.

OWTS Failure

In General terms, a system has failed when wastewater is no longer safely treated and/or dispersed and therefore represents a health risk or a threat to the environment. Signs of a failing system range from an elevated liquid level in the septic tank to a discharge of effluent to the surface of the ground.

MCEH will respond to all reports or complaints of failing OWTSs and sewage surfacing on a particular property. MCEH will conduct a site visit of the property to confirm the validity of the report. If confirmed, MCEH will issue a Notice of Violation to the property owner directing them to take immediate action to stop the discharge of sewage and to repair the system. A permit will be required to repair the system and a follow up inspection will be conducted. Under normal circumstances, repairs will be required within 30 days of the issuance of the Notice of Violation, unless a work plan requiring more time is approved by MCEH. In any case, the discharge of sewage to the ground surface must be abated during this timeline.

In most cases, MCEH will become aware of a failing OWTS by the inspection report produced following servicing, as described in the Inspection and Maintenance section. Failure to repair or replace a failing system will result in enforcement as provided in Section VII of this LAMP.

SECTION VIII
SEPTAGE MANAGEMENT

Septage is the partially treated waste from an OWTS. It consists of all the liquid wastes that are generated from a building or structure and drain through the structure's plumbing to the septic tank. In the septic tank, where primary treatment takes place, the waste separates into three distinct layers: the upper scum layer, the clarified middle layer and the lower sludge layer.

Over time, the scum and sludge layers accumulate to the point where the biologically active clarified area is minimized. When this occurs, the tank should be pumped out. The liquid waste pumped from the tank is referred to as septage. Septage, like all sewage, must be disposed of in a manner that protects public health.

This LAMP and the Implementing Ordinance require all septage, once removed from the tank by the registered pumper, to be transported to a disposal facility that operates under the authority of a permit issued by the Lahontan Regional Water Board. Currently, there are three facilities in Mono County that receive septage. These three facilities are the Mammoth Community Water District, the Lee Vining Public Utilities District, and the June Lake Public Utilities District. In addition, septage is accepted by Inyo County at the Bishop/Sunland evaporative sewage ponds, from registered septic pumpers working in the County.

With approximately 2,200 septic systems in the County, it is anticipated that on average 440,000 gallons of pumped septage will be distributed amongst these three sewage treatment facilities on an annual basis. This is based on 20% of those septic systems being pumped annually. Although MCEH recommends that each OWTS septic tank be pumped at least every 5 years, in reality many go longer than this interval between pumping. By contrast, some septic tanks will be pumped more often than every 5 years for those OWTS that have a permit to operate and must be inspected more frequently than every 5 years.

SECTION IX
PROGRAM ADMINISTRATION AND RECORDS MAINTENANCE

Program Administration

MCEH is responsible for oversight of 13 County programs that involve permitting responsibilities. These programs are divided between 4 full-time and one half-time employees. All MCEH staff are Registered Environmental Health Specialists and senior or journey-level staff positions. Over the course of the past 3 years (2014-2016), an average of 120 hours per year was coded to the County's OWTS Program. This equates to 0.06 Full Time Equivalent (FTE) of a position dedicated to the OWTS Program. Although one staff person handles the majority of the work, other MCEH staff are dedicated to cover OWTS Program responsibilities, as necessary.

For time accounting purposes, all staff complete a Daily Activity Report (DAR) that provides details of time spent in each program each day. DARs can be used to account for all time spent by staff in any given program and will be used to generate reports required by this LAMP for OWTS activities.

EnvisionConnect, a data management system used by MCEH to manage their regulatory programs and processes, will be used to notify MCEH staff of upcoming required inspections and maintenance for all OWTS operating permits in the database. MCEH is likely to develop a separate Microsoft Excel spreadsheet to track OWTS with operating permits and their inspection and maintenance schedules.

MCEH is a division of the Mono County Health Department (MCHD). The OWTS Program is funded by a combination of OWTS permit fees and MCHD general funds, which receives a large portion of its budget from State Realignment funds. MCHD receives no funds from the

County's general fund. All MCEH fees (including OWTS Program fees) are determined by multiplying the amount of time spent in a program by the calculated hourly rate for MCEH staff.

The standards for the construction, operation, and maintenance of OWTS are contained in this LAMP and the Implementing Ordinance, as incorporated into the Mono County Code. While the LAMP and the Implementing Ordinance are comprehensive, some aspects may be governed by administrative policy. This typically occurs when there is a need to clarify a procedure or address issues related to administration of the code. These policies will be approved by the Director of MCEH after consultation with staff and, as appropriate, the County Public Health Director.

Reporting and Data Collection

Permit records are currently maintained in paper and electronic formats. The Implementing Ordinance requires that a permit be obtained to construct, modify, repair or abandon an OWTS. When a permit application is received, the information is maintained on a Microsoft Excel spreadsheet and a record of the permit entered into the EnvisionConnect database. Information compiled includes the property owner's name and contact information, the site address, the Assessor's Parcel Number, the contractor information, as well as a description and the specifications of the OWTS. When the project is completed and has received final approval, the permit, supporting documents, and photographs are maintained in paper files and electronic files, and the EnvisionConnect database and Microsoft Excel spreadsheet are updated to show that the project has been completed.

As required in this LAMP, permits to operate will be issued for all new Alternative OWTS and OWTS that utilize supplemental treatment. Implementation of operating permits will entail tracking, inspection, and maintenance records being maintained. These records will be maintained as electronic files in the EnvisionConnect database, as well as in saved electronic files within the County's server database. Paper files will also be maintained for the foreseeable future until such time that MCEH makes the decision to no longer utilize a paper filing system for this program. Sewage pumper company registration and monthly pumping reports will also be compiled and stored via a Microsoft Excel spreadsheet and/or entered into EnvisionConnect for reporting purposes.

Water Quality Assessment Program

MCEH will implement a Water Quality Assessment Program (WQAP) to evaluate the impact of OWTS discharges on groundwater and surface water quality in the County. The WQAP will include monitoring and analysis of water quality data, review of complaints, OWTS failures, and OWTS inspections. This water quality data will be obtained from the following sources:

- Random well samples
- Well samples taken to establish a well as a "potable source"
- Routine water samples taken by Small Community Public Water Systems
- Water quality data from water management agencies/organizations

- Any other sampling data deemed relevant or necessary for the protection of groundwater and surface water supplies

As required by Sections 3.3 and 9.3 in the OWTS Policy, MCEH shall submit an annual report by February 1 of each year to the Lahontan Regional Water Board for the previous calendar year. This annual report will summarize MCEH's OWTS Program staff activities, including permit activities, complaints and other activities, as required. This report will be submitted in a format that is acceptable by the Lahontan Regional Water Board. In addition, every fifth year the annual report will include an evaluation of the WQAP.