



Central Valley Regional Water Quality Control Board

25 February 2015

<Local Agency Manager>

<Street Address>

<City, Zip Code>

REVIEW CRITERIA, LOCAL AGENCY MANAGEMENT PROGRAMS (LAMPS) FOR TIER 2 ONSITE WASTEWATER TREATMENT SYSTEMS

On 19 June 2012, the State Water Resources Control Board (State Board) adopted *Policy for the Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems* (Policy). The Policy requires your agency to determine if it will comply with the prescriptive Tier 1 requirements of the Policy or, elect to implement Tier 2 requirements by submitting a Local Agency Management Program (LAMP). If your agency wishes to, it would submit its LAMP to the Central Valley Regional Water Quality Control Board (Central Valley Water Board) for review and approval following a public comment period¹. Since many of the agencies within the Central Valley Water Board have expressed their desire to pursue the Tier 2 option, staff has developed the attached checklist to serve two purposes:

- Serve as a guide to the agency as it develops a LAMP, and
- Assist Board staff to expedite their review of the proposed LAMPs.

The checklist was developed by Central Valley Water Board staff in cooperation with the California Conference of Directors of Environmental Health and State Water Resources Control Board staff. It summarizes OWTS Policy requirements for LAMPs and is to be used and completed during development of your LAMP. For your convenience, we can e-mail you the checklist as a spreadsheet.

The checklist was developed to ensure that a LAMP will comply with Section 9 of the OWTS Policy. To aid in determining compliance with the Policy, we request that you develop your LAMP in two parts; *Program* and *Codes*. The *Program* part should describe your agency's means of complying with the OWTS, and must include adequate detail, including technical information, to support how all the criteria work together to

¹ Approved, the final version will serve as a conditional waiver of Waste Discharge Requirements, pursuant to §13269 California Water Code. For details, see:

http://www.waterboards.ca.gov/water_issues/programs/owts/docs/owts_policy.pdf.

protect water quality and human health (Section 9.5, OWTS Policy). The *Codes* part should be a complete, detailed compilation of appropriate supporting local codes and ordinances that demonstrate your agencies legal authority to fully implement the LAMP to ensure compliance with the OWTS Policy.

We encourage you to work with Central Valley Water Board staff during development of your LAMP to ensure it fully complies with the OWTS Policy. The following are staff contacts for this program:

- Redding Office: Eric Rapport (530) 224-4998, or erapport@waterboards.ca.gov,
- Rancho Cordova Office: Anne Olson at (916) 464-4740 or aolson@waterboards.ca.gov,
- Fresno Office: Dale Harvey at (559) 445-6190 or [dharvey@waterboards.ca.gov](mailto:dh Harvey@waterboards.ca.gov).

We look forward to working with you on this very important program for the Central Valley Water Board.

CLINT E. SNYDER, P.G.
Assistant Executive Officer
EJR: Imw

Attachment: Checklist

cc + attach:

Tim O'Brien, State Water Resources Control Board, Sacramento (all)

Robert Busby, Central Valley Regional Water Quality Control Board, Rancho Cordova (Local Agencies in R5S)

Lonnie Wass, Central Valley Regional Water Quality Control Board, Fresno (Local Agencies in R5F)

Completeness Checklist for LAMPs

GENERAL REQUIREMENTS FOR LAMPs				
OWTS Policy Section	OWTS Policy Section Summary	Region 5 Comments (These do not replace your review of the OWTS Policy. Italics and websites are specific explanations, more detailed than in the Policy.)	Relevant LAMP Section	Legal Authority/ Code Section
3.3	Annual Reporting	For Section 3.3 et seq., describe your program for annual reporting to Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff in a tabular spreadsheet format.	3.0(2)(a) Pg 14	MCC 13.04.040
3.3.1	Complaints	Include numbers and locations of complaints, related investigations, and means of resolution.	3.0(2)(a) Pg 14 Att 1	MCC 13.04.040
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.	3.0(2)(a) Pg 14 Att 3	MCC 13.04.040
3.3.3	Permits for New and Replacement OWTS	Include numbers and locations of permits for new and replacement OWTS, and their Tiers.	3.0(2)(a) Pg 14 Att 2	MCC 13.04.040
3.4	Permanent Records	Describe your program for permanently retaining records, and means of making them available to Central Valley Water Board staff within 10 working days of a written request.	3.0(2)(b) Pg 14	MCC 13.04.040
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.	3.0(2)(c) Pg 14	MCC 13.04.040
9.0	Minimum OWTS Standards	This Section is an introduction; we require no specific LAMP Section citation here.	-----	Not applicable
9.1	Considerations for LAMPs	For Section 9.1 et seq., provide 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.	4.0 Pg 15	MCC 13.04.040
9.1.1	Degree of vulnerability due to local hydrogeology	<i>Describe your commitment, and proposed means to identify hydrogeologically vulnerable areas for Section 9.3.2, after compiling monitoring data. 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. Such professionals, where appropriate during a Water Quality Assessment, should 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, and fractures in bedrock).</i>	32.0 Pg 49 Also, See soil definitions and qualified professional definition	MCC 13.04.040
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. <i>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.</i>	4.0(1) Pg 15	MCC 13.04.040

9.1.3	Shallow soils requiring non-standard dispersal systems	<i>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.</i>	Table 3 Pg 64 Def "Effective Soil Depth" Pg 7 4.0(26) pg 16	MCC 13.04.040
9.1.4	High domestic well usage areas	<i>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.</i>	4.0(1) Pg 15 32.0 Pg 49	MCC 13.04.040
9.1.5	Fractured bedrock	<i>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.</i>	4.0(1) Pg 15 15.0(1)(c) Pg 24 18.0 Pg 30	MCC 13.04.040
9.1.6	Poorly drained soils	<i>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.</i>	6.0 Pg 18	MCC 13.04.040
9.1.7	Vulnerable surface water	<i>Our key potential concern is eutrophication of fresh surface water. While typically with relatively low mobility in groundwater and recently informally banned in dishwasher 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.</i>	4.0(1) Pg 15	MCC 13.04.040
9.1.8	Impaired water bodies	<i>Wolf Creek, Nevada County, and Woods Creek, Tuolumne County will require Tier 3 Advanced Protection Management Programs. This applies to Nevada, Placer, and Tuolumne Counties. See Attachment 2 of the OWTS Policy.</i>	33.0 Pg 49	MCC 13.04.040
9.1.9	High OWTS density areas	<i>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.</i>	32.0 Pg 49	MCC 13.04.040
9.1.10	Limits to parcel size	<i>At minimum, consider hydraulic mounding, nitrate and pathogen loading, and sufficiency of potential replacement areas.</i>	32.0 Pg 49	MCC 13.04.050

9.1.11	Areas with OWTS that predate adopted standards	This refers to areas with known, multiple existing OWTS.	31.0 Pg 49	MCC 13.04.040
9.1.12	Areas with OWTS either within prescriptive, Tier 1 setbacks, or within setbacks that a Local Agency finds appropriate	This refers to areas with known, multiple existing OWTS.	31.0 Pg 49 Table 1 Pg 62	MCC 13.04.040
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.	4.0 Pg 15 Table 2 Pg 63 Attachment 7(f) 3.0(2)(d) Pg14	MCC 13.04.040
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.	4.0 Pg15 8.0 Pg 20	MCC 13.04.040 MCC 13.04.070 MCC 13.04.080
9.2.2	Special Provision Areas and Requirements near Impaired Water Bodies	<i>Wolf Creek, Nevada County, and Woods Creek, Tuolumne County will require Tier 3 Advanced Protection Management Programs. This applies to Nevada, Placer, and Tuolumne Counties. See Attachment 2 of the OWTS Policy.</i>	33.0 Pg 49	MCC 13.04.040
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.	34.0(2) Pg49 4.0(19) Pg 15	MCC 13.04.040
9.2.4	Qualifications for Persons who Work on OWTS	Qualifications generally cover requirements for education, training, and licensing. <i>We suggest that Local Agencies review information available from the California Onsite Water Association (COWA), see:</i> http://www.cowa.org/	Definition "Qualified Professional" Pg 10 "maintenance provider" Pg8	MCC 13.04.040
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. <i>At minimum, we suggest providing this information on your webpage.</i>	3.0(2)(e) Pg14	
9.2.6	Septage Disposal	Assess existing and proposed disposal locations, and their adequacy.	4.0(22) Pg16 Att 11	MCC 13.04.040 MCC 13.04.150
9.2.7	Maintenance Districts and Zones	<i>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.</i>	31.0 32.0 Pg 49	MCC 13.04.040
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 <i>State Board Resolution 2009-0011</i> : http://www.waterboards.ca.gov/centralvalley/water_issues/salinity/laws_regs_policies/rw_policy_implementation_mem.pdf	31.0 32.0 Pg 49-	MCC 13.04.040
9.2.9	Watershed Management Groups	Coordinate with <i>volunteer well monitoring programs</i> and similar watershed management groups.	31.0 32.0 Pg 49-	MCC 13.04.040

9.2.10	Proximity of Collection Systems to New or Replacement OWTS	Evaluate proximity of sewer systems to new and replacement OWTS. <i>See also Section 9.4.9.</i>	8.0(4)(f)(c) Pg 20	MCC 13.04.040
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.	3.0(2)(c) Pg 14 Table 1 Pg 62	MCC 13.04.040
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; <i>however we will need rationale in detail.</i>	4.0(1) Pg15	MCC 13.04.040
9.2.13	Cesspool Discontinuance and Phase-Out	Provide plans and schedule.	27.0 Pg44-4.0(2) Pg 15	MCC 13.04.040 MCC 13.04.090 MCC 13.04.170 MCC 13.04.180
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:	3.0(2)(b) Pg14 31.0/32.0 Pg49	MCC 13.04.040
9.3.1	Permit Records, OWTS with Variances	Describe your records maintenance; numbers, locations, and descriptions of permits where you have granted variances.	34.0(2)(e) Pg49	MCC 13.04.040
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. <i>We are available to 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 following links:</i> 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/M58.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	32.0 Pg 49	MCC 13.04.040

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 $\delta^{18}\text{O}$ and $\delta^{15}\text{N}$ 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).	32.0 Pg 49	MCC 13.04.040
9.3.2.2	Domestic Well Sampling, Routine Real Estate Transfer Related	This applies only if those samples are routinely performed and reported.	32.0 Pg 49	MCC 13.04.040
9.3.2.3	Water Quality of Public Water Systems	Reviews can be by your agency or another municipality.	32.0 Pg 49	MCC 13.04.040
9.3.2.4	Domestic Well Sampling, New Well Development	This applies if those data are reported.	32.0 Pg 49	MCC 13.04.040
9.3.2.5	Beach Water Quality Sampling, H&S Code §115885	<i>Public beaches include those on freshwater.</i>	32.0 Pg 49	MCC 13.04.040
9.3.2.6	Receiving Water Sampling Related to NPDES Permits	This refers to existing data from other monitoring programs.	32.0 Pg 49-	MCC 13.04.040
9.3.2.7	Data contained in California Water Quality Assessment Database	This refers to existing data from other monitoring programs.	32.0 Pg 49	MCC 13.04.040
9.3.2.8	Groundwater Sampling Related to Waste Discharge Requirements	This refers to existing data from other monitoring programs.	32.0 Pg 49	MCC 13.04.040
9.3.2.9	Groundwater Sampling Related to GAMA Program	This refers to existing data from other monitoring programs.	32.0 Pg 49	MCC 13.04.040
9.3.3	Annual Status Reports Covering 9.3.1-9.3.2	Reports are due 1 February, annually, beginning one year after a 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.	32.0 Pg 49	MCC 13.04.040
9.4	Not Allowed or Authorized in LAMP:	For Section 9.4 et seq., ensure that your LAMP covers prohibitions.		
9.4.1	Cesspools	Local Agencies cannot authorize cesspools of any kind or size.	27.0 Pg44 4.0(2) Pg 15	MCC 13.04.040
9.4.2	Projected Flow greater than 10,000 gpd	Apply professional judgment to further limit projected flows.	3.0(2)(d) Pg 14	MCC 13.04.040

9.4.3	Effluent Discharger Above Post-Installation Ground Surface	For example, Local Agencies cannot authorize effluent disposal using sprinklers, exposed drip lines, free-surface wetlands, and ponds.	4.0(3) Pg15	MCC 13.04.040
9.4.4	Installation on Slopes greater than 30% without Registered Professional's Report	<i>See also earlier comments, Section 9.1.1, regarding potential geotechnical concerns.</i>	15.0(1)(e) Pg 24 Table 4 Pg64 4.0(28)Pg16	MCC 13.04.040
9.4.5	Decreased Leaching Area for IAPMO-Certified Dispersal System with Multiplier less than 0.70	IAPMO refers to International Association of Plumbing and Mechanical Officials. <i>Decreased leaching area refers to alternatives to conventional (stone-and-pipe) dispersal systems; these alternatives require relatively less area. The multiplier, less than 1, allows for a reduction in dispersal field area relative to a conventional system.</i>	Not an option in Modoc LAMP	MCC 13.04.040
9.4.6	Supplemental Treatments without Monitoring and Inspection	<i>Therefore, ensure that the LAMP describes periodic inspection and monitoring for OWTS with supplemental treatments.</i>	16.0Pg29 4.0(17) Pg16 4.0(23)Pg16	MCC 13.04.040
9.4.7	Significant Wastes from RV Holding Tanks	<i>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.</i>	4.0(1) Pg 15 3.0(2)(e) Pg14 Def "residential strength wastewater" Pg10	MCC 13.04.040
9.4.8	Encroachment Above Groundwater	Bottom of OWTS dispersal systems cannot be less than 2 feet above groundwater, or bottom of seepage pits, less than 10 feet above groundwater. <i>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.</i>	4.0 (26) Pg 16 Table 8 Pg66	MCC 13.04.040
9.4.9	Installations Near Existing Sewers	New and replacement OWTS cannot occur on any lot with available public sewers less than 200 feet from a building or exterior drainage facility (exception; connection fees plus construction costs are greater than 2 times the replacement OWTS costs, and Local Agency determines no impairment to any drinking water.)	8.0(4)(f)(C) Pg20	MCC 13.04.040
9.4.10	Minimum Setbacks:	These setbacks are from public water systems.	Table 1 Pg62 and 6.0(4)(b) Pg 18	MCC 13.04.040
9.4.10.1	From Public Supply Wells	If the dispersal system is less than 10' in depth, then the setback must be greater than 150' from public water supply well.	Table 1 Pg62 and 6.0(4)(b) Pg 18-	MCC 13.04.040
9.4.10.2	From Public Supply Wells	If the dispersal system is greater than 10' in depth, then the setback must be greater than 200' from public water supply well.	Table 1 Pg62 and 6.0(4)(b) Pg 18-	MCC 13.04.040
9.4.10.3	From Public Supply Wells, Regarding Pathogens	If the dispersal system is greater than 20' in depth, and less than 600' from public water supply well, then the setback must be greater than the distance for two-year travel time of microbiological contaminants, as determined by qualified professional. In no case shall the setback be less than 200'.	Table 1 Pg 62 and 6.0(4)(b) Pg 18-	MCC 13.04.040
9.4.10.4	From Public Surface Water Supplies	If the dispersal system is less than 1,200' from public water system's surface water intake, within its drainage catchment, and potentially threatens an intake, then the setback must be greater than 400' from the high water mark of the surface water body.	Table 1 Pg 62 and 6.0(4)(b) Pg 18-	MCC 13.04.040

9.4.10.5	From Public Surface Water Supplies	If the dispersal system is greater than 1,200' but less than 2,500' from public water system's surface water intake, within its drainage catchment, and potentially threatens an intake, then the setback must be greater than 200' from high water mark of surface water body.	Table 1 Pg 62 and 6.0(4)(b) Pg 18-	MCC 13.04.040
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.	4.0(1) Pg 15	MCC 13.04.040
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.	4.0(1) Pg 15	MCC 13.04.040
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.	See Stats Attachments 12-16	MCC 13.04.040
9.6	Regional Water Quality Control Board Consideration of LAMP	Regional Boards shall consider past performance of local programs to protect water quality. <i>We will generally consider past performance based on our reviews of annual status and evaluation reports; see Section 9.3.3.</i>	See Stats Attachments 12-16	MCC 13.04.040

References:

Hantzsche, N.N. and E.J. Finnemore (1992). Predicting groundwater nitrate-nitrogen impacts. "Groundwater," 30, No. 4, pages 490-499.

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.

Local Agency Addressees:

Redding Office:	Rancho Cordova Office:	Fresno Office:
Brad Banner Environmental Health Director, Butte County 202 Mira Loma Drive Oroville, CA 95965	Mike Israel Environmental Health Director Amador County 810 Court Street Jackson, CA 95642-2132	Brian Moss Environmental Health Director Calaveras County 891 Mountain Ranch Road San Andreas, CA 95249-9709
Kevin Backus Environmental Health Director Glenn County 257 North Villa Avenue Willows, CA 95988	Craig Erickson Environmental Health Director Colusa County 124 East Webster Street Colusa, CA 95932	Glenn Allenle Environmental Health Director Fresno County 1221 Fulton Mall Fresno, CA 93721
Warren Farnum Environmental Health Director Modoc County 202 West 4 th Street Alturas, CA 96101	Gerri Silva Environmental Health Director El Dorado County 2850 Fairlane Court, Bldg. C Placerville, CA 95709	Matt Constantine Environmental Health Director Kern County 1800 Mount Vernon Avenue Bakersfield, CA 93306
Jerry Sipe Environmental Health Director Plumas County 270 County Hospital Road, Suite 127 Quincy, CA 95971	Ray Ruminski Environmental Health Director Lake County 922 Bevins Court Lakeport, CA 95453-9739	Jeff Taber Environmental Health Director Kings County 330 Campus Drive Hanford, CA 93230
Carla Serio Environmental Health Director Shasta County 1855 Placer Street, Suite 201 Redding, CA 96001	Amy Irani Environmental Health Director Nevada County 950 Maidu Avenue Nevada City, CA 95959	Jill Yaeger Environmental Health Director Madera County 2037 West Cleveland Avenue Madera, CA 93637
Tim Potanovic Environmental Health Director Tehama County 633 Washington Street Red Bluff, CA 96080	Wesley Nicks Environmental Health Director Placer County 3091 County Center Drive, Suite 180 Auburn, CA 95603	David Conway Environmental Health Director Mariposa County 5100 Bullion Street, P.O. Box 5 Mariposa, CA 95338
Doug Danz Environmental Health Director Town of Paradise 5555 Skyway Paradise, CA 95969-4931	John Rogers Environmental Health Director Sacramento County 10590 Armstrong Avenue Mather, CA 95655	Ron Rowe Environmental Health Director Merced County 260 East 15 th Street Merced, CA 95341-6216
	Donna Heran Environmental Health Director San Joaquin County 1868 East Hazelton Avenue Stockton, CA 95205-6232	Nilsa Gonzales Environmental Health Director Tulare County 5957 South Mooney Blvd. Visalia, CA 93277

	Elizabeth Morgan Environmental Health Director Sierra County P.O. Box 7 Loyalton, CA 96118	
	Terry Schmidtbauer Environmental Health Director Solano County 675 Texas Street, Suite 5000 Fairfield, CA 94533	
	Jami Aggers Environmental Health Director Stanislaus County 3800 Cornucopia Way, Suite C Modesto, CA 95358-9494	
	Jeff Williams Environmental Health Director Sutter County 1130 Civic Center Blvd., Suite A Yuba City, CA 95993	
	Robert Kostlivy Environmental Health Director Tuolumne County 2 South Green Street Sonora, CA 95370	
	Leslie Lindbo Environmental Health Director Yolo County 137 North Cottonwood Street, Suite 2400 Woodland, CA 95695	
	Tejinder Maan Environmental Health Director Yuba County 915 8 th Street Marysville, CA 95901	