
San Francisco Bay Regional Water Quality Control Board

TO: Applicants for Onsite Wastewater Treatment Systems & Local Agencies


FROM: Dyan Whyte
Assistant Executive Officer

DATE: February 10, 2015

SUBJECT: Clarifying which standards apply for Onsite Wastewater Treatment Systems (OWTS)

This memo is a revision of my December 22, 2014, memo which seemed to cause some confusion and concern. To further improve communications, we are planning to meet with each county in the San Francisco Bay Region that permits OWTS to discuss its existing program and any changes being considered as part of the LAMP development process. Water Board staff will be contacting agency staff to schedule these meetings. In addition, we will be hosting a meeting in late spring in coordination with the State Water Board to answer questions about the LAMP review process and discuss the use of State databases such as Geotracker and CEDEN (as required in the OWTS Policy).

The State Water Board OWTS Policy became effective on May 13, 2013. The Policy includes several sets of standards for different conditions, specified as tiers. Tiers 0, 3, and 4 are applicable now. The Policy established a 60-month compliance deadline by which local agencies would either apply the OWTS Policy standards contained in Tier 1, or prepare a LAMP for Regional Water Board approval in accordance with the Tier 2 standards. This memo clarifies the Water Board's expectations for OWTS permitting before May 2018 (the end of the 60-month period) or until a local agency has a LAMP approved by the Water Board, whichever comes first. Herein we will refer to this period of time as the "interim period".

We have received questions regarding which standard applies to new OWTS during the interim period if there is a discrepancy between a local ordinance and the State Water Board's OWTS Policy Tier 1 requirements. Local agencies may continue to implement their existing programs during the interim period, and no comparison with Tier 1 is necessary. However, the existing program must fully comply with the Regional Water Board's Basin Plan and policies in effect when the OWTS Policy was adopted. If the May 2018 date passes and there is not an approved LAMP, the local agency shall implement the applicable standards that are more protective of water

quality contained in either the OWTS Policy Tier 1 or the legally adopted and approved ordinances and regulations of the local agency's OWTS program.

If the Water Board determines that a proposed OWTS poses a threat to surface or groundwater, the Water Board, after consulting with the local agency, may require the OWTS applicant to submit a Report of Waste Discharge (ROWD). In the event that local agency staff has concerns that an existing or proposed OWTS will not sufficiently protect water quality, please contact Christine Boschen, Section Leader, Watershed Management Division (510) 622-2346 or Christine.boschen@waterboards.ca.gov.

Tier 0 – Existing OWTS

Tier 0 – Existing OWTS

Existing OWTS that are properly functioning and do not meet the conditions of failing systems or otherwise require corrective action (for example, to prevent groundwater impairment) as specifically described in Tier 4, and are not determined to be contributing to an impairment of surface water as specifically described in Tier 3, are automatically included in Tier 0.

6.0 Coverage for Properly Operating Existing OWTS

- 6.1 Existing OWTS are automatically covered by Tier 0 and the herein included waiver of waste discharge requirements if they meet the following requirements:
 - 6.1.1 have a projected flow of 10,000 gallons-per-day or less;
 - 6.1.2 receive only domestic wastewater from residential or commercial buildings, or high-strength wastewater from commercial food service buildings that does not exceed 900 mg/L BOD and has a properly sized and functioning oil/grease interceptor (a.k.a. grease trap);
 - 6.1.3 continue to comply with any previously imposed permitting conditions;
 - 6.1.4 do not require supplemental treatment under Tier 3;
 - 6.1.5 do not require corrective action under Tier 4; and
 - 6.1.6 do not consist of a cesspool as a means of wastewater disposal.
- 6.2 A Regional Water Board or local agency may deny coverage under this Policy to any OWTS that is:
 - 6.2.1 Not in compliance with Section 6.1;
 - 6.2.2 Not able to adequately protect the water quality of the waters of the State, as determined by the Regional Water Board after considering any input from the local agency. A Regional Water Board may require the submission of a report of waste discharge to receive Region specific waste discharge requirements or waiver of waste discharge requirements so as to be protective.
- 6.3 Existing OWTS currently under waste discharge requirements or individual waiver of waste discharge requirements will remain under those orders until notified in writing by the appropriate Regional Water Board that they are covered under this Policy.

Tier 3 – Impaired Areas

Tier 3 – Advanced Protection Management Programs for Impaired Areas

Existing, new, and replacement OWTS that are near impaired water bodies may be addressed by a TMDL and its implementation program, or special provisions contained in a Local Agency Management Program. If there is no TMDL or special provisions, new or replacement OWTS within 600 feet of impaired water bodies listed in Attachment 2 must meet the applicable specific requirements of Tier 3.

10.0 Advanced Protection Management Program

An Advanced Protection Management Program is the minimum required management program for all OWTS located near a water body that has been listed as impaired due to nitrogen or pathogen indicators pursuant to Section 303(d) of the Clean Water Act. Local agencies are authorized to implement Advanced Protection Management Programs in conjunction with an approved Local Agency Management Program or, if there is no approved Local Agency Management Program, Tier 1. Local agencies are encouraged to collaborate with the Regional Water Boards by sharing any information pertaining to the impairment, provide advice on potential remedies, and regulate OWTS to the extent that their authority allows for the improvement of the impairment.

10.1 The geographic area for each water body's Advanced Protection Management Program is defined by the applicable TMDL, if one has been approved. If there is not an approved TMDL, it is defined by an approved Local Agency Management Program, if it contains special provisions for that water body. If it is not defined in an approved TMDL or Local Agency Management Program, it shall be 600 linear feet [in the horizontal (map) direction] of a water body listed in Attachment 2 where the edge of that water body is the natural or levied bank for creeks and rivers, the high water mark for lakes and reservoirs, and the mean high tide line for tidally influenced water bodies, as appropriate. OWTS near impaired water bodies that are not listed on Attachment 2, and do not have a TMDL and are not covered by a Local Agency Management Program with special provisions, are not addressed by Tier 3.

10.2 The requirements of an Advanced Protection Management Program will be in accordance with a TMDL implementation plan, if one has been adopted to address the impairment. An adopted TMDL implementation plan supersedes all other requirements in Tier 3. All TMDL implementation plans adopted after the effective date of this Policy that contain load allocations for OWTS shall include a schedule that requires compliance with the load allocations as soon as practicable, given the watershed-specific circumstances. The schedule shall require that OWTS implementation actions for OWTS installed prior to the TMDL implementation plan's effective date shall commence within 3 years after the TMDL implementation plan's effective date, and that OWTS implementation actions for OWTS installed after the TMDL implementation plan's effective date shall commence immediately. The TMDL implementation plan may use some or all of the Tier 3 requirements and shall establish the applicable area of

Tier 3 – Impaired Areas

implementation for OWTS requirements within the watershed. For those impaired water bodies that do have an adopted TMDL addressing the impairment, but the TMDL does not assign a load allocation to OWTS, no further action is required unless the TMDL is modified at some point in the future to include actions for OWTS. Existing, new, and replacement OWTS that are near impaired water bodies and are covered by a Basin Plan prohibition must also comply with the terms of the prohibition, as provided in Section 2.1.

10.3 In the absence of an adopted TMDL implementation plan, the requirements of an Advanced Protection Management Program will consist of any special provisions for the water body if any such provisions have been approved as part of a Local Agency Management Program.

10.4 The Regional Water Boards shall adopt TMDLs for impaired water bodies identified in Attachment 2, in accordance with the specified dates.

10.4.1 If a Regional Water Board does not complete a TMDL within two years of the time period specified in Attachment 2, coverage under this Policy's waiver of waste discharge requirements shall expire for any OWTS that has any part of its dispersal system discharging within the geographic area of an Advanced Protection Management Program. The Regional Water Board shall issue waste discharge requirements, general waste discharge requirements, waivers of waste discharge requirements, or require corrective action for such OWTS. The Regional Water Board will consider the following when establishing the waste discharge requirements, general waste discharge requirements, waivers of waste discharge requirements, or requirement for corrective action:

10.4.1.1 Whether supplemental treatment should be required.

10.4.1.2 Whether routine inspection of the OWTS should be required.

10.4.1.3 Whether monitoring of surface and groundwater should be performed.

10.4.1.4 The collection of a fee for those OWTS covered by the order.

10.4.1.5 Whether owners of previously-constructed OWTS should file a report by a qualified professional in accordance with section 10.5.

10.4.1.6 Whether owners of new or replacement OWTS should file a report of waste discharge with additional supporting technical information as required by the Regional Water Board.

10.5 If the Regional Water Board requires owners of OWTS to submit a qualified professional's report pursuant to Section 10.4.1.5, the report shall include a determination of whether the OWTS is functioning properly and as designed or requires corrective actions per Tier 4, and regardless of its state of function, whether it is contributing to impairment of the water body.

10.5.1 The qualified professional's report may also include, but is not limited to:

Tier 3 – Impaired Areas

- 10.5.1.1 A general description of system components, their physical layout, and horizontal setback distances from property lines, buildings, wells, and surface waters.
 - 10.5.1.2 A description of the type of wastewater discharged to the OWTS such as domestic, commercial, or industrial and classification of it as domestic wastewater or high-strength waste.
 - 10.5.1.3 A determination of the systems design flow and the volume of wastewater discharged daily derived from water use, either estimated or actual if metered.
 - 10.5.1.4 A description of the septic tank, including age, size, material of construction, internal and external condition, water level, scum layer thickness, depth of solids, and the results of a one-hour hydrostatic test.
 - 10.5.1.5 A description of the distribution box, dosing siphon, or distribution pump, and if flow is being equally distributed throughout the dispersal system, as well as any evidence of solids carryover, clear water infiltration, or evidence of system backup.
 - 10.5.1.6 A description of the dispersal system including signs of hydraulic failure, condition of surface vegetation over the dispersal system, level of ponding above the infiltrative surface within the dispersal system, other possible sources of hydraulic loading to the dispersal area, and depth of the seasonally high groundwater level.
 - 10.5.1.7 A determination of whether the OWTS is discharging to the ground's surface.
 - 10.5.1.8 For a water body listed as an impaired water body for pathogens, a determination of the OWTS dispersal system's separation from its deepest most infiltrative surface to the highest seasonal groundwater level or fractured bedrock.
 - 10.5.1.9 For a water body listed as an impaired water body for nitrogen, a determination of whether the groundwater under the dispersal field is reaching the water body, and a description of the method used to make the determination.
- 10.6 For new, replacement, and existing OWTS in an Advanced Protection Management Program, the following are not covered by this Policy's waiver but may be authorized by a separate Regional Water Board order:
- 10.6.1 Cesspools of any kind or size.
 - 10.6.2 OWTS receiving a projected flow over 10,000 gallons per day.
 - 10.6.3 OWTS that utilize any form of effluent disposal on or above the ground surface.
 - 10.6.4 Slopes greater than 30 percent without a slope stability report approved by a registered professional.

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- 10.6.5 Decreased leaching area for IAPMO certified dispersal systems using a multiplier less than 0.70.
- 10.6.6 OWTS utilizing supplemental treatment without requirements for periodic monitoring or inspections.
- 10.6.7 OWTS dedicated to receiving significant amounts of wastes dumped from RV holding tanks.
- 10.6.8 Separation of the bottom of dispersal system to groundwater less than two (2) feet, except for seepage pits, which shall not be less than 10 feet.
- 10.6.9 Minimum horizontal setbacks less than any of the following:
 - 10.6.9.1 150 feet from a public water well where the depth of the effluent dispersal system does not exceed 10 feet in depth;
 - 10.6.9.2 200 feet from a public water well where the depth of the effluent dispersal system exceeds 10 feet in depth:
 - 10.6.9.3 Where the effluent dispersal system is within 600 feet of a public water well and exceeds 20 feet in depth the horizontal setback required to achieve a two-year travel time for microbiological contaminants shall be evaluated. A qualified professional shall conduct this evaluation. However in no case shall the setback be less than 200 feet.
 - 10.6.9.4 Where the effluent dispersal system is within 1,200 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 400 feet from the high water mark of the reservoir, lake or flowing water body.
 - 10.6.9.5 Where the effluent dispersal system is located more than 1,200 feet but less than 2,500 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 200 feet from the high water mark of the reservoir, lake or flowing water body.
 - 10.6.9.6 For replacement OWTS that do not meet the above horizontal separation requirements, the replacement OWTS shall meet the horizontal separation to the greatest extent practicable. In such case, the replacement OWTS shall utilize supplemental treatment and other mitigation measures.
 - 10.6.9.7 For new OWTS, installed on parcels of record existing at the time of the effective date of this Policy, that cannot meet the above horizontal separation requirements, the OWTS shall meet the horizontal separation to the greatest extent practicable and shall

Tier 3 – Impaired Areas

utilize supplemental treatment for pathogens as specified in section 10.10 and any other mitigation measures as prescribed by the permitting authority.

10.7 The requirements contained in Section 10 shall not apply to owners of OWTS that are constructed and operating, or permitted, on or prior to the date that the nearby water body is added to Attachment 2 who commit by way of a legally binding document to connect to a centralized wastewater collection and treatment system regulated through WDRs as specified within the following timeframes:

10.7.1 The owner must sign the document within forty-eight months of the date that the nearby water body is initially listed on Attachment 2.

10.7.2 The specified date for the connection to the centralized community wastewater collection and treatment system shall not extend beyond nine years following the date that the nearby water body is added to Attachment 2.

10.8 In the absence of an adopted TMDL implementation plan or Local Agency Management Program containing special provisions for the water body, all new or replacement OWTS permitted after the date that the water body is initially listed in Attachment 2 that have any discharge within the geographic area of an Advanced Protection Management Program shall meet the following requirements:

10.8.1 Utilize supplemental treatment and meet performance requirements in 10.9 if impaired for nitrogen and 10.10 if impaired for pathogens,

10.8.2 Comply with the setback requirements of Section 7.5.1 to 7.5.5, and

10.8.3 Comply with any applicable Local Agency Management Program requirements.

10.9 Supplemental treatment requirements for nitrogen

10.9.1 Effluent from the supplemental treatment components designed to reduce nitrogen shall be certified by NSF, or other approved third party tester, to meet a 50 percent reduction in total nitrogen when comparing the 30-day average influent to the 30-day average effluent.

10.9.2 Where a drip-line dispersal system is used to enhance vegetative nitrogen uptake, the dispersal system shall have at least six (6) inches of soil cover.

Tier 3 – Impaired Areas

- 10.10 Supplemental treatment requirements for pathogens
- 10.10.1 Supplemental treatment components designed to perform disinfection shall provide sufficient pretreatment of the wastewater so that effluent from the supplemental treatment components does not exceed a 30-day average TSS of 30 mg/L and shall further achieve an effluent fecal coliform bacteria concentration less than or equal to 200 Most Probable Number (MPN) per 100 milliliters.
- 10.10.2 The minimum soil depth and the minimum depth to the anticipated highest level of groundwater below the bottom of the dispersal system shall not be less than three (3) feet. All dispersal systems shall have at least twelve (12) inches of soil cover.
- 10.11 OWTS in an Advanced Protection Management Program with supplemental treatment shall be designed to meet the applicable performance requirements above and shall be stamped or approved by a Qualified Professional.
- 10.12 Prior to the installation of any proprietary treatment OWTS in an Advanced Protection Management Program, all such treatment components shall be tested by an independent third party testing laboratory.
- 10.13 The ongoing monitoring of OWTS in an Advanced Protection Management Program with supplemental treatment components designed to meet the performance requirements in Sections 10.9 and 10.10 shall be monitored in accordance with the operation and maintenance manual for the OWTS or more frequently as required by the local agency or Regional Water Board.
- 10.14 OWTS in an Advanced Protection Management Program with supplemental treatment components shall be equipped with a visual or audible alarm as well as a telemetric alarm that alerts the owner and service provider in the event of system malfunction. Where telemetry is not possible, the owner or owner's agent shall inspect the system at least monthly while the system is in use as directed and instructed by a service provider and notify the service provider not less than quarterly of the observed operating parameters of the OWTS.
- 10.15 OWTS in an Advanced Protection Management Program designed to meet the disinfection requirements in Section 10.10 shall be inspected for proper operation quarterly while the system is in use by a service provider unless a telemetric monitoring system is capable of continuously assessing the operation of the disinfection system. Testing of the wastewater flowing from supplemental treatment components that perform disinfection shall be sampled at a point in the system after the treatment components and prior to the dispersal system and shall be conducted quarterly based on analysis of total coliform with a minimum detection limit of 2.2 MPN. All effluent samples must include the geographic coordinates of the sample's location. Effluent samples shall be taken by a service provider and analyzed by a California Department of Public Health certified laboratory.

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- 10.16 The minimum responsibilities of a local agency administering an Advanced Protection Management Program include those prescribed for the Local Agency Management Programs in Section 9.3 of this policy, as well as monitoring owner compliance with Sections 10.13, 10.14, and 10.15.

Tier 4 – OWTS Requiring Corrective Action

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OWTS that require corrective action or are either presently failing or fail at any time while this Policy is in effect are automatically included in Tier 4 and must follow the requirements as specified. OWTS included in Tier 4 must continue to meet applicable requirements of Tier 0, 1, 2 or 3 pending completion of corrective action.

11.0 Corrective Action for OWTS

- 11.1 Any OWTS that has pooling effluent, discharges wastewater to the surface, or has wastewater backed up into plumbing fixtures, because its dispersal system is no longer adequately percolating the wastewater is deemed to be failing, no longer meeting its primary purpose to protect public health, and requires major repair, and as such the dispersal system must be replaced, repaired, or modified so as to return to proper function and comply with Tier 1, 2, or 3 as appropriate.
- 11.2 Any OWTS septic tank failure, such as a baffle failure or tank structural integrity failure such that either wastewater is exfiltrating or groundwater is infiltrating is deemed to be failing, no longer meeting its primary purpose to protect public health, and requires major repair, and as such shall require the septic tank to be brought into compliance with the requirements of Section 8 in Tier 1 or a Local Agency Management Program per Tier 2.
- 11.3 Any OWTS that has a failure of one of its components other than those covered by 11.1 and 11.2 above, such as a distribution box or broken piping connection, shall have that component repaired so as to return the OWTS to a proper functioning condition and return to Tier 0, 1, 2, or 3.
- 11.4 Any OWTS that has affected, or will affect, groundwater or surface water to a degree that makes it unfit for drinking or other uses, or is causing a human health or other public nuisance condition shall be modified or upgraded so as to abate its impact.
- 11.5 If the owner of the OWTS is not able to comply with corrective action requirements of this section, the Regional Water Board may authorize repairs that are in substantial conformance, to the greatest extent practicable, with Tiers 1 or 3, or may require the owner of the OWTS to submit a report of waste discharge for evaluation on a case-by-case basis. Regional Water Board response to such reports of waste discharge may include, but is not limited to, enrollment in general waste discharge requirements, issuance of individual waste discharge requirements, or issuance of waiver of waste discharge requirements. A local agency may authorize repairs that are in substantial conformance, to the greatest extent practicable, with Tier 2 in accordance with section 9.2.3 if there is an approved Local Agency Management Program, or with an existing program if a Local Agency Management Program has not been approved and it is less than 5 years from the effective date of the Policy.

Tier 4 – OWTS Requiring Corrective Action

- 11.6 Owners of OWTS will address any corrective action requirement of Tier 4 as soon as is reasonably possible, and must comply with the time schedule of any corrective action notice received from a local agency or Regional Water Board, to retain coverage under this Policy.
- 11.7 Failure to meet the requirements of Tier 4 constitute a failure to meet the conditions of the waiver of waste discharge requirements contained in this Policy, and is subject to further enforcement action.



BOARD OF SUPERVISORS

RICHARD VALLE
Supervisor, Second District

September 8, 2015

Dilan Roe
Program Manager – Land Use & Local Oversight Program
Alameda County Environment Health Department
1131 Harbor Bay Parkway
Alameda, CA 94502

RE: Request for the Alameda County Commission on Septic System Issues to Create
a Sunol Septic Working Group

Ms. Roe,

On July 15, 2015 the Sunol Citizens Advisory Council (SCAC) voted to approve better linking the Sunol Septic Subcommittee (the Subcommittee) to the Alameda County Commission on Septic System Issues (the Commission). This action was taken to improve: access to Environmental Health Department (EHD) staff, meeting transparency, and coordination with county planning efforts.

In order to provide a basis for moving forward our office would propose, at the request of SCAC, the establishment of the Sunol Septic Working Group (the Working Group) as a Standing Committee of the Commission. The Sunol Working Group would be made up of members of the SCAC, the Commission, and residents of Sunol. We ask that you present this request to the Commission.

The Working Group would be a Standing Committee appointed by the Commission. SCAC asks that they appoint as part of the Working Group at least one member of SCAC and 4 members of the Subcommittee who wish to have an active role in participation. The appointed members from SCAC and the Commission will be responsible for providing progress/status reports to their respective bodies. We are also requesting that EHD staff attend the working group meetings.

The Working Group, as a Standing Committee of the Commission, will have open public meetings in compliance with the Brown Act. We request that the first meetings take place one (1) hour prior to the convening of the quarterly Commission meetings, subject to change as determined by the Working Group.

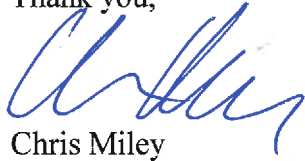
The preference would be to establish a Working Group that can report to the Commission and the SCAC. However, if the Commission does not wish to do this, in the alternative we ask that that a portion of a future Commission meeting be designated as a joint meeting with the Subcommittee.

While the Subcommittee and Commission would need to take any actions separately, for example any motions would need to have separate votes, the discussions could be joint discussions and hearing of public comments related to issues affecting Sunol. If the first joint meeting is successful, then members of the Subcommittee and/or Commission could request future joint meetings.

The purpose of the Subcommittee and both of these proposals is to establish a working group of local residents that can provide the Commission, as well as EHD and SCAC, with policy and program recommendations on septic items that impact Sunol. Additionally, it will allow SCAC to be better informed about ongoing policy work that EHD staff is leading around the septic program.

Our office is open to continued participation throughout this process. Please contact me at (510) 272-6692 to discuss our next steps.

Thank you,



Chris Miley

Cc: Shawn Wilson, Chief of Staff, Supervisor Scott Haggerty's Office
Ronald Browder, Interim Director, Environmental Health Department
Hana AlBarazi, Operations & Outreach Coordinator, Environmental Health Department
Kathleen Pacheco, Senior Deputy County Counsel, County Counsel

Agenda Items Requested by Commissioner Jacqueline Sommers on 9/17/15

1. Permits (by type: Pre-Perc/Perc Data, New Plans, Additions/Repairs/Upgrades, Destruction/Condemnation)
 - a. # of permit applications (by district)
 - b. # of elapsed days since application submitted (all applications - including those that the dept. deems incomplete or missing data)
 - c. permit turnaround hurdles - discussion
2. Staffing update: organizational chart, staff responsibilities, staff training
3. Advanced Systems: total # (by type: Pump, Sand Filter, Aerobic), monitoring status (from performance wells)
4. Updates from 4/15/15:
 - a. Self-reported owner information (regarding letter mailed to owners in March)
 - b. Staff working with Planning & Public Works to digitize site files/create a database
 - c. Status about the "Fact Sheet" about OWTS with a pump (i.e. deed restrictions, annual operating permit, costs of annual inspections, etc.)
 - d. Status on department's development of an application submittal checklist
5. Provide an example of a complicated application, including perc data, geotechnical reports, design, etc.

Alameda County Local Agency Management Plan Development

Alameda County currently administers a local wastewater management program for Onsite Wastewater Treatment Systems (OWTS) under the authority of Chapter 15.18 of the Alameda County General Ordinance Code. The authority to administer and enforce the OWTS Ordinance and Regulations promulgated under the ordinance is held by the Department of Environmental Health.

On June 19, 2012, the California State Water Resources Control Board (State Water Board) adopted the Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems (OWTS Policy). The OWTS Policy was adopted in response to Assembly Bill 885 enacted by the State legislature more than a decade earlier (Jackson, 1999-2000). The OWTS Policy became effective in May 2013. In order to continue its local oversight of OWTS, the County must develop an OWTS Local Agency Management Program (LAMP) in compliance with the State OWTS Policy.

Alameda County does not currently have the resources to provide the professional engineering and environmental consulting work necessary to develop the LAMP and meet the time frames set forth in the OWTS Policy. Therefore, the Contractor will provide technical expertise and consultation services to assist the County with development of the LAMP, public meetings and coordination with the State.

Questa Engineering Corporation (Contractor) and the Rural Community Assistance Corporation (RCAC) have been retained by Santa Clara County, Kern County, San Mateo County and now, Alameda County to assist them with their LAMP development. They have also previously worked with Butte County to evaluate their wastewater management program and provided the Butte County Board of Supervisors with an independent, expert evaluation of the County's policies and practices and recommended additions/modifications to the wastewater program.

More information on RCAC and Questa Engineering Corporation, as well as scope, timelines and tasks for LAMP development are provided below.

Karen McBride, Rural Community Assistance Corporation (RCAC) Bio

As an Environmental Specialist, Karen McBride provides technical assistance and training at various conferences, institutes, workshops, clinics and client agencies. In partnership with her clients, Ms. McBride is responsible for coordinating RCAC staff and other technical assistance providers to perform work and provide timely follow-up for each project. She develops policy and technical papers, articles and manuals for RCAC and other agencies using applicable and current government regulations and policies. Ms. McBride is involved in forming, coordinating and participating in outreach and rural development networks and associations. Before joining RCAC, Ms. McBride was a Certified Wastewater Operator and Manager of On-Site Wastewater Zone Operations (OSWDZ). Her responsibilities included planning and inspection of properties, directing and administering all activities of the on-site wastewater program, making decisions within regulations regarding issuance of permits or necessary repairs, and providing educational information regarding OSWDZ to association members and the general public.

Norm Hantzsche, Questa Engineering Corporation Bio

Mr. Hantzsche has a BS in Civil Engineering from Stanford University in 1971 and received an MS in Civil Engineering from UC Davis in 1973. He has been a California Registered Civil Engineer since 1975. Mr. Hantzsche has 42 years of experience in water resources and environmental engineering in California, including 6 years with the State and Regional Water Quality Control Boards, and the remainder in private consulting practice. He has been the Principal and Managing Engineer with Questa Engineering Corporation for the past 32 years.

LAMP Development Scope & Timelines

Contractor shall provide professional engineering and environmental services to the County to assist in developing a Local Agency Management Program (LAMP) for onsite wastewater treatment systems (OWTS) in compliance with the State OWTS Policy. Contractor shall perform work and complete tasks so that the LAMP and supporting documents (amended ordinance and Onsite Wastewater Systems Manual), including each draft, will be completed within the time frames set forth below and incorporation of the tasks set forth in the Schedule attached (see last page).

Contractor's scope of work includes the following tasks:

1. Task 1: Existing Practices Review (September 2015 – November 2015)

Task 1 consists of a review of the County's existing onsite wastewater system ordinances, regulations, policies and practices to determine areas for update and revisions needed to come into compliance with current industry standards and specific requirements of the new State OWTS Policy (AB 885). This shall include the following:

- a. Obtain copies and complete a preliminary review of all pertinent ordinances, regulations, policies, guidelines, memoranda, forms and reports regarding existing onsite wastewater practices in the County.
- b. Meet with County staff to obtain input, interpretations, and supplementary information regarding the existing program and areas of concern, and review Contractors preliminary questions and issues. Confer, as appropriate, with San Francisco Bay Regional Water Quality Control Board (Regional Water Board) staff to obtain input.
- c. Complete the review of the County program and develop ideas and options for updates and improvements based on experience with other local OWTS programs, and mandatory changes dictated by the State OWTS Policy.
- d. Summarize the results of this task in a draft memorandum and provide to County staff for review and comment. Identify the options and/or recommendations for compliance with key provisions of the State OWTS Policy for Local Agency Management Programs (Tier 2).

2. Task 2: Suitability, Usage and Impacts of OWTS (September 2015 through December 2015)

Task 2 covers the review and evaluation of land use (number and distribution of OWTS) and environmental conditions (e.g., soils, groundwater, surface water) affecting the feasibility and use of OWTS in the County. This information shall then provide the basis for general assessment and recommendations regarding the suitability of different types of OWTS designs in various areas of the County for compliance with State OWTS Policy requirements.

This will consist of the following:

- a. Confer with County staff and other knowledgeable individuals to obtain input regarding land use, siting constraints (areas of high groundwater, soil depth limitations, excessively rapid or slow percolation problems, density/water quality problems, flooding and other

local constraints) and other relevant factors affecting onsite wastewater system suitability, design requirements performance in the County, and review and evaluate alternative design approaches to address these issues.

- b. Utilize existing County file information and/or GIS parcel information to estimate the number and distribution of OWTS in the County. Combine parcel information with environmental data to map and tabulate the usage of OWTS according to different OWTS suitability zones and watershed areas in the county.
 - c. The results from (a) and (b) shall be used to define general suitability zones for OWTS to comply with State OWTS Policy, including compliance with Tier 3 Advanced Protection Management Program for Impaired Areas.
3. Task 3: Ordinance, Technical Guidelines and LAMP (draft for Public Comment to be completed no later than January 2016, draft for submittal to State to be completed no later than March 2016)

Task 3 covers the review and/or preparation of an amended OWTS ordinance, accompanying technical guidelines/Performance Standards ("Onsite Wastewater Systems Manual"), and a Local Agency Management Program (LAMP), as required for compliance with State OWTS Policy requirements for Tier 2 local regulatory programs. The documents produced under this task shall be informed by the findings and recommendations from Tasks 1 and 2. Contractor shall review and/or prepare the following:

- a. Onsite Wastewater Treatment System Ordinance. Prepare draft of suggested amendments to existing Alameda County ordinance pertaining to OWTS. If requested, Contractor shall provide information to and answer questions from the County Counsel's office as well as Planning and Building Department staff. During preparation, Contractor shall review examples from other counties in the region and comments shall be solicited from the Regional Water Board staff. The contents of the recommendations for revisions to the ordinance shall reflect the findings and recommendations from Tasks 1 and 2 and shall specifically include elements needed to comply with State OWTS Policy requirements for Tier 2 local programs.

Following community outreach and feedback, Contractor shall assist County staff, as appropriate, with any changes or additions to the proposed ordinance amendments.

- b. Onsite Wastewater Systems Manual (Performance Standards). Contractor shall assemble and prepare guidelines and procedures for implementation of the ordinance in the form of a draft Onsite Wastewater Systems Manual. This document shall contain technical details related to the investigation, permitting, design, construction and maintenance of OWTS and shall be maintained and amended, as needed from time-to-time, by the County, subject to Regional Water Board approval. The following is a preliminary outline of items to be included in the draft Onsite Systems Manual:

- (1) Incorporation of current Alameda County Department of Environmental Health OWTS regulations (including policies and permitting procedures) amended as appropriate and revised to be in a format included in the Onsite Wastewater Systems Manual as preferred by the Regional Water Board.
- (2) Site investigation requirements and procedures, including soil and site evaluation, percolation testing methods, groundwater observations, etc.

- (3) Siting, design and construction requirements for conventional OWTS (septic tank-gravity drainfields).
- (4) Siting, design and construction requirements for alternative OWTS.
- (5) Siting, design and construction requirements for non-discharging wastewater systems (holding tanks, vault privies, portable toilets).
- (6) Siting, design and construction requirements for graywater systems.
- (7) Performance evaluation requirements for existing systems.
- (8) Repair requirements utilizing non-standard system requirements (nonconforming and haul-away systems).
- (9) Surface water diversion structure requirements (curtain drains, drainage ditches).
- (10) Operation, maintenance and monitoring requirements.

If requested, during preparation of the draft Onsite Wastewater Systems Manual, Contractor shall provide information to and answer questions from the Planning and Building Department staff. Contractor shall assist County staff with any final changes or additions to the draft Onsite Wastewater Systems Manual arising out of the community feedback. Prior to finalizing the draft Onsite Wastewater Systems Manual, Contractor shall confer with the Regional Water Board staff for their review and comment, and make appropriate revisions to the draft Onsite Wastewater Systems Manual. Contractor shall prepare the final draft Onsite Wastewater Systems Manual and assist with the formal Regional Water Board submittal and approval process.

- c. Local Agency Management Program. Contractor shall prepare a draft document presenting the County's proposed Local Agency OWTS Management Program (LAMP) as required under Tier 2 of the State OWTS Policy. This document shall meet all requirements and procedures contained in the Ordinance and Onsite Wastewater Systems Manual, along with other pertinent background information developed from Tasks 1 and 2. The draft LAMP shall be organized in a manner to demonstrate point-by-point compliance with State OWTS Policy Tier 2 and Tier 3 requirements, with the following tentative outline:

- (1) Section 1 - Introduction and Background
- (2) Section 2 - Environmental Conditions, OWTS Usage and Water Quality Management Measures (Tier 2, 9.1)
- (3) Section 3 - OWTS Siting, Design and Construction Requirements (Tier 2, 9.2 and Tier 3)
- (4) Section 4 - Special OWTS Management Issues (Tier 2, 9.3 and Tier 3)
- (5) Section 5 - Prohibitions
- (6) Section 6 - Program Administration (Tier 2, 9.5)
- (7) Appendices - Supporting rationale and other information, as needed

Contractor shall assist County staff with any changes or additions to the draft LAMP arising out of the community feedback. Prior to finalizing the draft LAMP, Contractor

shall confer with the Regional Water Board staff for their review and comment, and make appropriate revisions to the LAMP. Contractor shall prepare the final draft LAMP and assist with the formal Regional Water Board submittal and approval process.

4. Task 4: Meetings and Project Management (September through end of contract)

Task 4 covers the various project management activities, meetings, and presentations that shall be conducted over the course of the project, which are expected to include the following:

- a. Progress Meetings/Workshop Sessions. During the course of the project, the Contractor team shall hold several meetings/workshops sessions with County staff to track progress, review work products and plan the next steps in the process.
- b. Public Hearings. Contractor shall attend and make presentations at public hearings, including community meetings and Board of Supervisors Regular and Committee meetings.
- c. Regional Water Board Meetings. Contractor shall meet with the Regional Water Board staff to present the draft Onsite Wastewater Manual and draft LAMP to facilitate comment prior to formal submittal of the documents.

5. Contractor shall begin performing services immediately upon execution of this Agreement by County and in accordance with the schedule attached.

Work Schedule

Contractor shall perform work in accordance with the following schedule:

Sept 18, 2015	Alameda County Department of Environmental Health (DEH) and Questa introduction and initial presentation on Local Agency Management Program (LAMP) development at Alameda County Transportation and Planning Committee Meeting
Sept 29, 2015	DEH and Questa introduction and initial presentation on LAMP development to Alameda County Septic Commission
Sept– Oct 2015	Working with Alameda County Department of Environmental Health (DEH) staff to prepare a draft LAMP, draft Onsite Wastewater Systems Manual, and draft County OWTS Ordinance Amendments
Nov 2015	Work completed sufficient to present an update on development of draft LAMP and supporting documents at the Alameda County Board of Supervisors Transportation and Planning Committee meeting
Nov– Jan 2015	Continue working with DEH staff to prepare a draft LAMP, draft Onsite Wastewater Systems Manual, and draft County OWTS Ordinance Amendments
Jan 2016	Proposed draft LAMP, Onsite Wastewater Systems Manual, and Ordinance Amendments completed for initial presentation to Septic Commission and start of (30 days) Public Comment Period
Jan 2016	DEH and Questa initial presentation to BOS Planning and Transportation (T&P) Committee Meeting of proposed draft LAMP, Onsite Wastewater Systems Manual, and Ordinance Amendments, as part of public comment period.
Feb 2016	Address and incorporate Septic Commission, T&P Committee and public comments on draft LAMP, Onsite Wastewater Systems Manual, and OWTS Ordinance Amendments and complete final drafts
March 2016	DEH and Questa presentations of final draft LAMP, Onsite Wastewater Systems Manual, and Ordinance Amendments to: • Septic Commission • BOS Planning and Transportation Committee Meeting • BOS Regular Board Meeting
March 2016	Draft LAMP, Onsite Wastewater Systems Manual, and OWTS Amendments finalized for submission to State
March 2016	Submittal of Alameda County’s proposed draft LAMP, Onsite Wastewater Systems Manual, and OWTS Ordinance & Regulations Amendments to Regional Water Board for Review