



## ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7

100 NORTH CANYONS PARKWAY, LIVERMORE, CA 94551 • PHONE (925) 454-5000 • FAX (925) 454-5727

**ORIGINATING SECTION:** GROUNDWATER SECTION

**CONTACT:** Matt Katen / Jarnail Chahal

**AGENDA DATE:** October 21, 2015

**ITEM NO.** 7c

**SUBJECT:** Authorization for Commercial Septic System Use, Murrieta's Well Winery

**SUMMARY:**

- Murrieta's Well Winery is seeking Zone 7's authorization for an existing commercial use of an onsite wastewater treatment system (OWTS) for their winery facility.
- The facility is situated on a 138-acre parcel located at 3005 Mines Road, in unincorporated South Livermore (APN 099A-2300-001-06).
- The parcel overlaps the Nutrient Management Plan's Special OTWS Requirement Area; however, the OWTS site and the majority of the parcel (110 acres) is located outside of the Special Requirement Area.
- Only domestic wastewater from the winery and from two residences is disposed through the three existing OWTSs. There are no winemaking process wastes disposed onsite.
- Currently, it is not feasible for the facility to connect to the municipal sewer because the site is located outside of the City of Livermore's Urban Growth Boundary and the cost and difficulties involved with extending municipal sewer service such a long distance are cost-prohibitive.
- Zone 7 Resolution 1165 prohibits the use of septic tanks for new commercial developments unless an exception is granted by the Board of Directors.
- Resolution 1165's standard acceptance criterion is 1.0 RRE/5 acres or less.
- Including the residential component, the loading for the portion of the parcel located outside of the Special Requirement Area where the three OWTSs are located is estimated to be 0.3 RRE/5 acres, which is well below both the current allowable limit and the recommended loading in the NMP.
- Following the Board-approved septic system decision tree process (Exhibit C of the attached memorandum), staff recommends retroactive approval of this existing commercial use of septic system including a finding that the use is in compliance with Resolution 1165 and sufficiently protective of the groundwater basin.
- As an additional protective measure, staff recommends the installation and periodic testing of one onsite groundwater monitoring well, at a staff-approved location.

**FUNDING:**

There is no funding impact associated with this item.

**RECOMMENDED ACTION:**

Adopt attached resolution approving the commercial use of a septic system for Murrieta's Well Winery, in accordance with Resolution 1165.

**ATTACHMENTS:**

- Memo Providing Additional Background and Discussion on Agenda Item
- Zone 7 Board Resolution

## **Interoffice Memo**

**Date:** October 21, 2015  
**To:** Jill Duerig, General Manager  
**From:** Matt Katen, Groundwater Section Manager  
Jarnail Chahal, Engineering Manager  
**Subject:** Authorization for Commercial Septic System Use, Murrieta's Well Winery

The following provides additional background and discussion on the above-referenced Agenda Item.

### **BACKGROUND:**

Murrieta's Well Winery has requested Zone 7's retroactive authorization for the continued commercial use of an existing onsite wastewater treatment system (OWTS) for an existing winery and event facility (Exhibit A). There are also two other existing conventional OWTSs serving two single-family residences onsite near the winery facility. The request for commercial use of an OWTS is being brought to Zone 7's attention at this time because Alameda County Environmental Health (ACEH) is requiring the replacement of the winery's conventional OWTS as a condition of their permit for a kitchen modernization project that the winery is undertaking. Although the land use and wastewater loading will remain the same as the existing levels, staff is bringing the approval request to the Board because the existing system was not previously considered by Zone 7.

The winery and the two residences are situated on a 138-acre parcel in unincorporated South Livermore (APN 099A-2300-001-06) that consists mostly of irrigated vineyards. The parcel abuts Mines Road on the east and Tesla Road on the north and the Arroyo Mocho bisects the property. About 28 acres of the parcel is inside of the Buena Vista Special OWTS Requirements Area identified in Zone 7's Nutrient Management Plan (NMP); however, all three OWTS are located on the 110-acre portion that is outside of the Special Requirement Area. In addition, the project site is located outside of the City of Livermore's Urban Growth Boundary (UGB), and about 1.3 mile from the closest public sewer main, which is in Livermore Avenue, near its intersection with Concannon Boulevard, making connection to the municipal sewer system unfeasible at this time.

The current winery has been in operation for about 25 years, but other wineries have operated on the site since the 1880's. There is currently no winemaking or bottling performed onsite, nor is any planned, so there is no process water being generated nor disposed onsite. The total onsite wastewater loading from the three OWTS has been estimated at 2100 gallons per day, or about 6.6 rural residential equivalents (RRE) (see Exhibit B). According to the application materials, the land use and onsite wastewater loading will remain essentially the same after the kitchen remodel and OWTS replacement.

In the 1980's, Zone 7 adopted Wastewater Management Policies to minimize the potential for impacts to groundwater from over use and misuse of septic tanks over the "Central Groundwater Basin and its fringe areas." One such policy prohibits the use of OWTS for any new commercial or industrial development unless an exception is approved by the Zone 7 Board. The Board has adopted a process and criteria for approval of OWTS for commercial use. The process is summarized in the Zone 7 Septic Tank Approval Decision Tree, which is provided as Exhibit C.

The standard Zone 7 approval criteria for commercial use of OWTS allows for a maximum loading of one Rural Residential Equivalent per five acres (1 RRE/ 5 Ac) for parcels located outside the NMP's Special Requirements Area. Inside the Special Requirement Areas, the maximum allowable loading is generally 0.5 RRE per 5 acres for parcels greater than 7 acres, but commercial use systems must be upgraded to include pre-treatment process for the reduction of nitrogen in the OWTS effluent. For the purpose of evaluating onsite wastewater loading, staff assumes 1 RRE to be equivalent to an average daily residential sewage discharge of 320 gallons per day (gpd) or 34 pounds of nitrogen per year, which is the amount of nitrogen calculated for the volume produced by a flow of 320 gpd with an average nitrogen concentration of 35 mg/L.

## **DISCUSSION:**

Prorating the winery's 6.6 RRE loading over either the entire parcel (138 acres) or the smaller portion that is outside of the Special Requirements Area (110 acres) results in onsite wastewater loadings of 0.24 RRE/5 Ac and 0.30 RRE/5 acres, respectively, which are both well below the more protective limit of 0.5 RRE/5 Ac described in the NMP for Special Requirement Areas.

Because the OWTS effluent is being discharged over a relatively small portion of the large parcel (i.e., clustering of OWTS), staff recommends that a groundwater monitoring well be installed down gradient of the clustered OWTS as part of the winery's OWTS replacement project to monitor the performance of the systems and to ensure the benefit of the larger parcel is providing sufficient natural attenuation of the wastewater loading. Staff would work with Murrieta's Well Winery staff to find a suitable site for the monitoring well.

Zone 7 staff reviewed the application and additional information provided by Acorn Onsite, Inc. on behalf of the Murrieta's Well Winery using Zone 7's Septic Tank Permit Review Decision Tree (Exhibit C) in accordance with procedures adopted by the Zone 7 Board in 1986. The decision path is as follows:

- The project does not result in a change in land use or wastewater loading; however, if the onsite wastewater loading changed in 1990, the applicant should have applied for Zone 7 authorization for a commercial use of an OWTS at that time. This case is being processed as a retroactive approval consideration.
- The proposed use conforms to the Zone 7 Wastewater Management Policy (WMP) that permits a maximum wastewater loading of 1 RRE/5 acres when no community sewage system is available. The estimated 2,100 gpd and 223 lbs-N/yr for the entire site and the portion outside of the Special Requirement Area are much less than the allowable maximum wastewater loading of 1 RRE/5 acres.
- Although the sewage generated by the winery is residential-like in character (it is mainly from restrooms and the kitchen), it is considered commercial wastewater since it comes from a commercial winery operation.
- The proposed septic tank use conforms to Zone 7's Resolution 1165, which prohibits the use of septic tanks for new commercial and industrial developments overlying the groundwater basin unless it can be satisfactorily demonstrated that the wastewater loading will be no more than that from "an equivalent rural residential unit." In this case, the prorated total onsite loading for the site has been estimated to be 0.30 RRE /5 Acres.

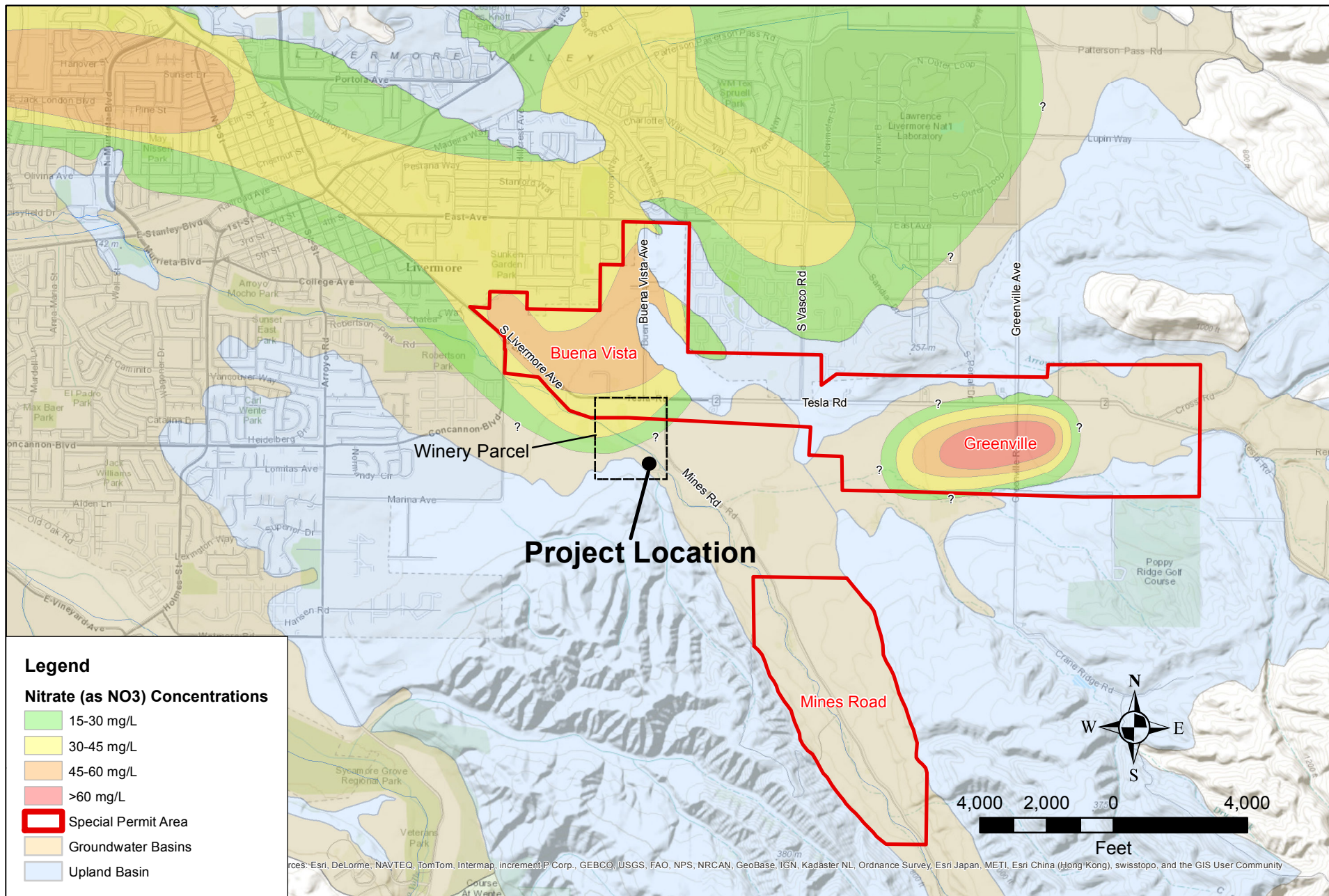
- Therefore, based on the information provided by the applicant, and the decision path summarized above, staff recommends that the existing septic tank use be approved retroactively, and the project be found to be in compliance with Zone 7's Resolution 1165 by the Zone 7 Board.

In addition, it is recommended that the approval be conditioned on the following:

1. That Alameda County Environmental Health Department also approves the use of the OWTS and provides oversight during its installation, operation and maintenance;
2. No wastewater disposal, other than that specifically approved herewith, be allowed without prior approval by the Zone 7 Water Agency;
3. That the project include the installation of one onsite groundwater monitoring well down gradient of the three OWTS, with the location to be approved by Zone 7 staff; and
4. When a public sewer is extended to within 200 feet of any onsite dwelling connected to the onsite wastewater treatment system (OWTS), the OWTS shall be abandoned, and all building sewers shall be connected to the public sewer.

#### **FIGURES & EXHIBITS:**

- Figure 1: Project Location Map  
Exhibit A: Septic Tank Application for Commercial Use  
Exhibit B: Project Wastewater Loading Worksheet  
Exhibit C: Zone 7 Septic Tank Approval Decision Tree



**ZONE 7 WATER AGENCY**  
100 North Canyons Parkway, Livermore, CA

DRAWN: CW

REVIEWED: MK

File:  
E:\Septic\Agenda Items\Murrietas Well Winery\MurrietasWellMap.mxd

**PROJECT LOCATION**  
**Murrieta's Well Winery**  
**3005 Mines Road**  
**Livermore, CA**

Scale: 1 in = 4,000 ft

Date: 10/2/15

**FIGURE 1**



**Alameda County Flood Control & Water Conservation District, Zone 7**  
 100 North Canyons Parkway • Livermore CA, 94551 • Phone: 925/454-5000 • Fax: 925/454-5726

**Septic Tank Application for Non-Residential Use**

**For Applicant to Complete**

1) Name of Business: Murielita's Well

2) Address: 3005 MINES RD  
LIVERMORE CA 94550

3) Contact Person: JOHN DUDLEY  
 Title: DIRECTOR OF ENG  
 Telephone: 925-456-2313  
 Fax No.: 925-456-2333

4) Location of Septic Tank Site:

a) Address: 3005 MINES RD  
LIVERMORE CA 94550

b) Assessors Parcel No.: 99A-2300-1-46

5) Statement of existing use of the property: MK

Winery Tasting Room, Wine  
Sales, Weddings, Meetings  
and 2 houses

6) Statement of proposed use of the property:

Same uses, remodelling kitchen  
and restrooms (winery)

7) Attach site map showing location of buildings, improvements, and septic tank/leachfield system.

8) Attach Hazardous Materials Management Plan, or statement of onsite hazardous materials use.

9) Applicant's signature: John Dudley

Date: 8/17/2015

**For Office Use Only (Shaded Areas)**

Septic Tank Permit No. \_\_\_\_\_

Taken by: MK Date: 9-3-2015

(Check Appropriate Action)

Approved:

\_\_\_ 1) Complies w/Res. No. 1165 Date: \_\_\_\_\_

\_\_\_ 2) Exception, Special Review 2 Date: \_\_\_\_\_

\_\_\_ 3) Exception, Special Review 1 Date: \_\_\_\_\_

Disapproved:

\_\_\_ 4) Non-compliance Date: \_\_\_\_\_

**Permit Conditions**

This permit is issued subject to the following General Conditions and to the circled Special Conditions:

**A. General Conditions:**

1. Limit the number of full-time employees to \_\_\_\_\_ persons.
2. Comply with policies of Wastewater Management Plan.
3. Comply with all other requirements of federal, state and local jurisdictions.
4. Subject to unscheduled inspections.
5. Connect to community sewerage system when within 200 feet of any property line.

**B. Special Conditions:**

1. Develop and maintain a Hazardous Materials Management Program as approved by Alameda County Environmental Health Division, Hazardous Materials Management Unit.
2. Provide sampling stations for analysis of suspected contaminants at applicant's expense as follows:

3. Other: \_\_\_\_\_



PELS# 66172 and CSLB #499418  
 2288 Buena Vista Avenue  
 Livermore, CA 94550

Telephone (925) 447-5200  
 Toll Free 1-800-832-7711  
 FAX (925) 447-0919

September 3, 2015

Matt Katen  
 Zone 7 Water Agency  
 100 North Canyons Parkway  
 Livermore, CA 94551

Regarding: Murrieta's Well Remodeling Project, 3005 Mines Road,  
 Livermore

Dear Matt:

Here is an Application for a replacement septic system or Onsite Wastewater Treatment System (OWTS) at Murrieta's Well. This proposed OWTS replacement is part of a remodel including modernizing the kitchen and restrooms.

The site is located on a parcel of 138 acres. There are two houses each with a septic system, one dwelling located northerly and the other is located westerly of the subject facility.

Based on owner provided information the following uses are expected at the remodeled facility:

1. Up to 300 wine tasting visitors (daily), with <sup>20</sup>~~10~~ employees working in the wine tasting.
2. Up to 110 guests at events such as weddings, typically Friday - Saturday during temperate months. Expect to have 10 employees at such events.
3. Wine release parties could have up to 700 visitors over the course of a day.

Design flow:

300 wine tasting x 2.5 gallons/visitor = 750 Gallons

<sup>20</sup>~~20~~ employees x 15 gallons/employee = <sup>300</sup>~~150~~ gallons

110 guests x 15 gallons/guest at event = 1650 gallons

10 employees x 15 gallons per employee = 150 gallons

These listed uses will have a maximum design flow of 2850 gallons per day.

The wine release parties are expected to be infrequent, perhaps

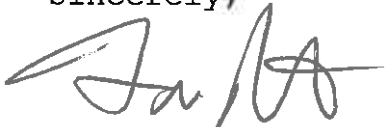
a few times per year and not significant for daily flow, if needed mobile restroom facilities will be brought in for large wine release events. For consideration of an annual loading, three events with 700 visitors @ 2.5 gallons should provide an expected wastewater quantity.

The preliminary design, in the area marked on the accompanying aerial view, utilizes a septic tank to provide primary treatment then shallow trench pressure distribution leach lines of the septic tank effluent. A reserve area is noted which would use drip dispersal of pretreated wastewater.

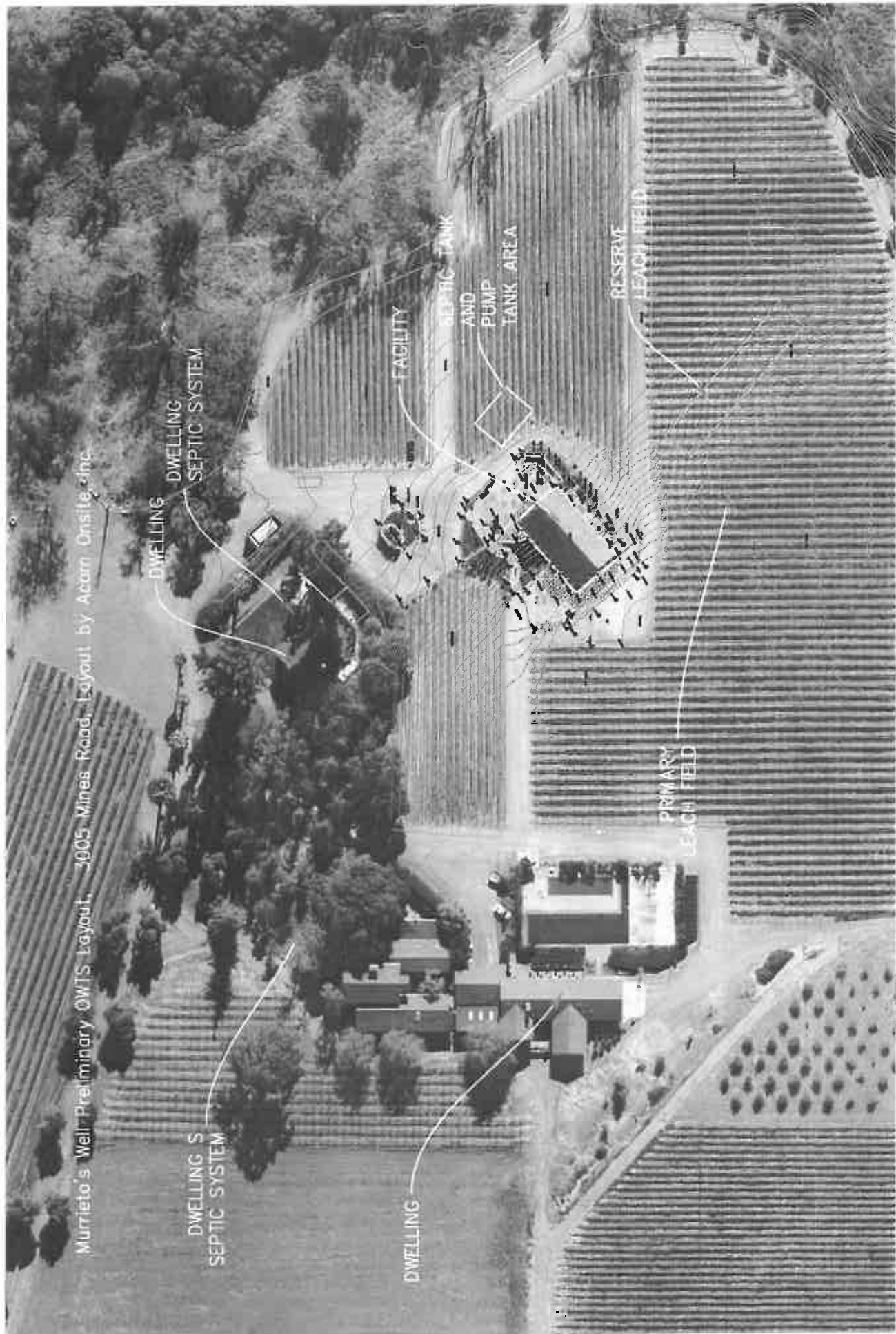
There will be cooking and food preparation at the facility; therefore, at least two grease interceptors located in series to remove fat, oil, and grease will be installed before the OWTS.

Please contact me if any additional information is needed for this application.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Tim Johnston', with a stylized flourish at the end.

Tim Johnston, P.E.  
Acorn Onsite, Inc.



Project Wastewater Loading Worksheet  
for  
**Murrieta's Well Winery and Event Center**  
**3005 Mines Road, Livermore**  
(APN 099A-2300-001-06)  
(Zone 7 Case # 15-072)

**Current and Proposed Wastewater** | (110 Acres)

| <u>Wastewater Loading Source</u> | <u>Loading Class</u> | <u>Average Daily Sewage Flow Rate<sup>(1)(2)</sup></u> | <u>Annual Nitrogen Loading<sup>(3)</sup></u> | <u>Total Rural Residential Equivalences<sup>(4)</sup></u> | <u>Total RRE Pro-rated per 5 Ac<sup>(5)</sup></u> |
|----------------------------------|----------------------|--------------------------------------------------------|----------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|
| 2 Single Family Dwellings        | residential          | 640 gpd                                                | 68.0 lbs N/yr                                | 2.00 RRE                                                  |                                                   |
| Tasting Room                     | commercial           | 1050                                                   | 111.6                                        | 3.28                                                      |                                                   |
| Special Events (80 per year)     | commercial           | 395                                                    | 42.0                                         | 1.23                                                      |                                                   |
| Large Events (3 per year)        | commercial           | 15                                                     | 1.6                                          | 0.05                                                      |                                                   |
| <b>TOTALS</b>                    |                      | <b>2100 gpd</b>                                        | <b>223 lbs N/yr</b>                          | <b>6.6 RRE</b>                                            | <b>0.30 RRE/5 acres</b>                           |

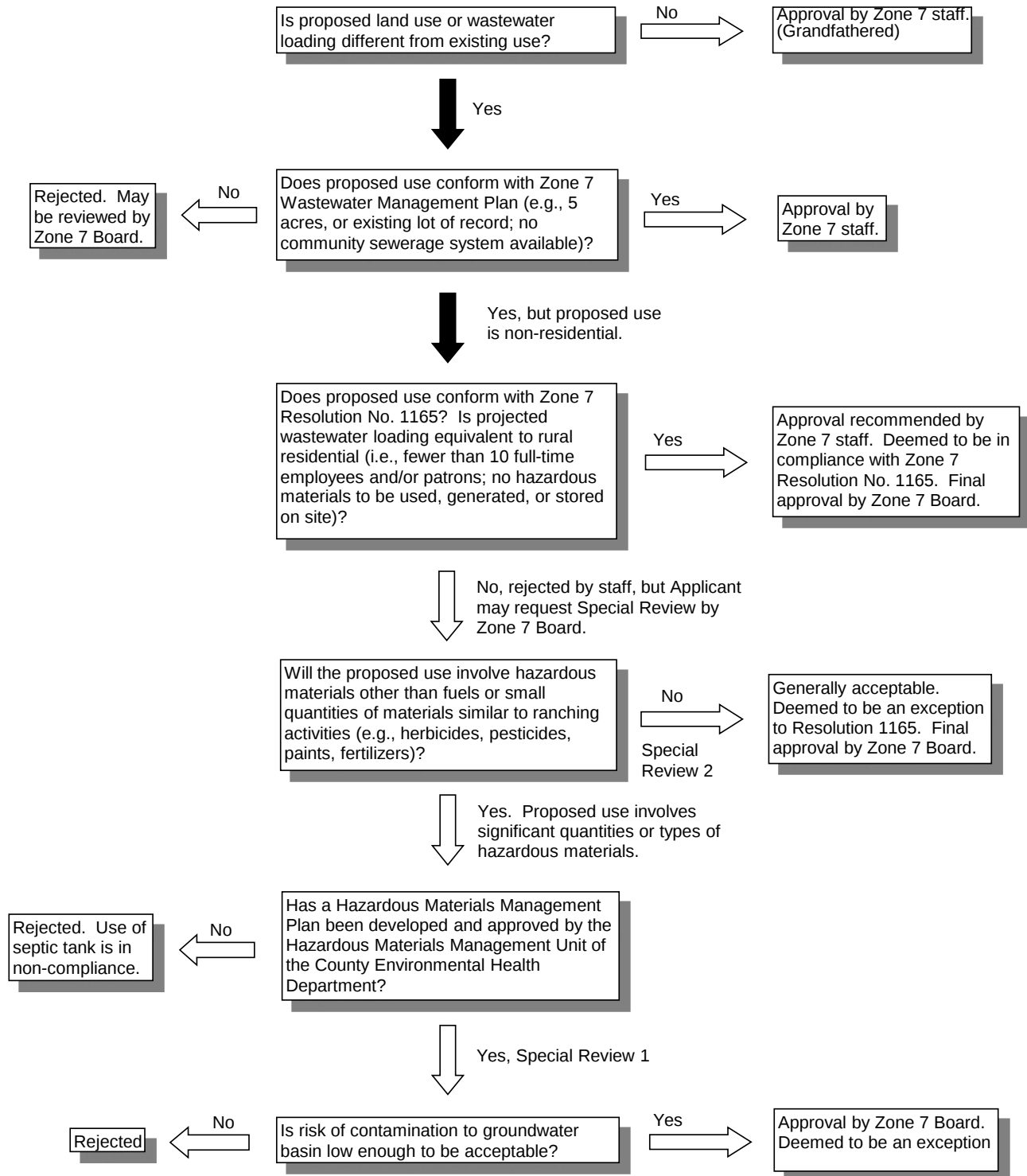
**Notes:**

- (1) Average sewage flow assumed for a single family residence regardless of number of bedrooms is 320 gpd
- (2) Estimated commercial sewage flows from Acorn Onsite, Inc., Sept 3, 2015
- (3) Assumes OWTS are functioning properly and average effluent concentration = 35 mg/L Total Nitrogen
- (4) Based on 1 RRE = 320 gpd
- (5) 5 Ac proration based on 110 Ac actual parcel size (i.e., 5/110 x Total RRE)

# Zone 7 Septic Tank Approval Decision Tree

|                                                 |                         |
|-------------------------------------------------|-------------------------|
| Applicant: <b>Murrieta's Well Winery</b>        | Case No.: <b>15-072</b> |
| Site Address: <b>3005 Mines Road, Livermore</b> |                         |
| Date: <b>October 21, 2015</b>                   |                         |

(Most septic tank reviews are made when the property owner request the Planning Department for a land use change, rezoning, or parcel split.)



ZONE 7  
ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

BOARD OF DIRECTORS

RESOLUTION NO.

INTRODUCED BY  
SECONDED BY

***Authorization for Commercial Use of a Septic System for Murrieta's Well Winery  
located at 3005 Mines Road, in South Livermore (APN 099A-2300-001-06)***

WHEREAS, the Board of Directors of Zone 7 of the Alameda County Flood Control and Water Conservation District adopted the Wastewater Management Plan for the Unsewered, Unincorporated Area of Alameda Creek Watershed above Niles (Resolution No. 1037, May 19, 1982) to protect the surface and groundwater resources within the Zone; and

WHEREAS, said Wastewater Management Plan provides for strict controls on the use of septic tank/leach field systems which may affect groundwater quality within the Zone 7 area; and

WHEREAS, the Board of Directors adopted a policy prohibiting the use of septic tank/leach field systems for new development zoned for commercial or industrial uses which overlies the central groundwater basin or any of its fringe basins unless it can be satisfactorily demonstrated that the wastewater loading be no more than the loading from an equivalent rural residential unit (Resolution No. 1165, August 28, 1986); and

WHEREAS, on October 15, 1986, the Board of Directors approved a Zone 7 Septic Tank Review Procedure for commercial/industrial development, and said Procedure provides for Special Review by the Board of Directors of Septic Tank Permit Applications for Non-residential Use; and

WHEREAS, on June 17, 2015, the Board of Directors adopted a Nutrient Management Plan that recommends additional septic tank permitting requirements for certain areas with high nitrates; and

WHEREAS, by application dated August 17, 2015 Murrieta's Well Winery, seeks approval for an existing use of an onsite wastewater treatment system for a commercial winery on a 138 acre parcel at 3005 Mines Road, in South Livermore (APN 099A-2300-001-06); and

WHEREAS, the total wastewater loading per five acres from all uses, residential and commercial, will be no greater than 0.3 of an equivalent rural residential unit; and

WHEREAS, the nature of the generated wastewater to be disposed to the septic system is similar to rural residential wastewater.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of Zone 7 of the Alameda County Flood Control and Water Conservation District hereby makes the following findings regarding said application:

1. It is not feasible at this time for the onsite facilities to connect to a municipal sewer; and
2. The proposed use conforms to the Zone 7 Wastewater Management Policy (WMP) that allows a maximum wastewater loading of one rural residential equivalence per five acres (1 RRE/5 Ac) when no community sewage system is available.

BE IT FURTHER RESOLVED that said septic tank use is deemed to be in compliance with Zone 7 Resolution No. 1165, but subject to the following conditions:

1. Zone 7's approval is contingent upon County Environmental Health Department's approval of the use and design and providing oversight during the operation and maintenance of the system.
2. No wastewater disposal, other than that specifically approved herewith, is allowed without prior approval by Zone 7.
3. That the project include the installation of one onsite groundwater monitoring well down gradient of the three OWTS, with the location to be approved by Zone 7 staff.
4. When a public sewer is extended to within 200 feet of any onsite building connected to the septic systems, the septic system shall be abandoned, and all building sewers shall be connected to the public sewer.

ADOPTED BY THE FOLLOWING VOTE:

AYES:

NOES:

ABSENT:

ABSTAIN:

I certify that the foregoing is a correct copy of a Resolution adopted by the Board of Directors of Zone 7 of the Alameda County Flood Control and Water Conservation District on October 21, 2015.

By \_\_\_\_\_  
President, Board of Directors