

TRANSIENT NON-COMMUNITY WATER SYSTEM INFORMATION

FOR THE

ROBERT KEENAN WINERY

LOCATED AT:

3656 Spring Mountain Road
St. Helena, CA 94574
NAPA COUNTY APN 022-150-036

PREPARED FOR:

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Care of: Michael Keenan
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Date

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INTRODUCTION

Robert Keenan Winery is applying for a Use Permit for their existing winery located at 3656 Spring Mountain Road in Napa County, California. According to the Use Permit application, the winery has been in operation since 1977 and that maximum production capacity will remain at the historic level of 50,000 gallons per year. No increase in wine production capacity is being proposed as part of this application. The Use Permit application also indicates that the winery will continue to have a maximum of four full time employees and establishes the following marketing program:

- Daily Tours and Tastings by Appointment
 - 35 visitors per day maximum
- Private Promotional Tastings with Meals
 - 18 per year
 - 35 guests maximum
 - Food prepared offsite by catering company
- Larger Private Marketing Events
 - 1 per year
 - 300 guests maximum
 - Food prepared offsite by catering company
 - Portable toilets brought in for guest use
- Private Harvest Events
 - 2 per year
 - 75 guests maximum
 - Food prepared offsite by catering company
 - Portable toilets brought in for guest use

Other existing improvements on the property include three residential structures, various accessory buildings, approximately 28 acres of vineyard, paved, gravel and dirt driveways and the utility infrastructure associated with the existing winery, residential and agricultural uses.

Since the number of employees plus the number of visitors is expected to exceed 24 for 60 or more days out of the year, the project will be required to implement a Transient Non-Community Public Water System.

Robert Keenan Winery has requested that Applied Civil Engineering Incorporated (ACE) prepare a brief report outlining the anticipated technical, managerial and financial aspects of the water system that will be required to serve the proposed winery to accompany the winery Use Permit application as required by Napa County.

WATER SYSTEM NAME

The water system will be known as the “Robert Keenan Winery Water System”.

NAME OF PERSON WHO PREPARED THIS REPORT

This report was prepared by Michael Muelrath, PE of Applied Civil Engineering Incorporated. Information regarding the parameters of the subject Use Permit application was provided by Jon Webb of Albion Surveys and Michael Keenan of Robert Keenan Winery.

TECHNICAL CAPACITY

System Description

Water for the existing residential and winery uses is currently provided by an existing groundwater well. We were unable to locate a Well Completion Report in the Napa County Planning, Building and Environmental Services, Environmental Health Division files and therefore we are not able to determine that the well has the required 50 foot deep annular seal for public water supplies and therefore a new well must be drilled to serve the new water system. The new well must be constructed per Napa County standards and treatment must be provided as required to meet applicable local, state and federal water quality requirements. At the time this report was prepared a new well was being drilled.

Detailed plans for the water treatment system will be prepared and presented to Napa County for review during the building permit stage, after the new well is completed and the required water quality testing is performed.

Water Demand Projection

We have used the Napa County Phase I Water Availability Analysis Estimated Water Use Guidelines to estimate the annual water demand for the existing and proposed residential, winery and agricultural uses to be approximately 16.7 acre-feet per year. The new well will be dedicated to serving the domestic water needs of the winery and residential structures only. The existing well will continue to serve the vineyard irrigation needs. Therefore, the estimated annual water demand for the water system will be 2.68 acre-feet per year.

Using the projected annual demand, we have calculated an average daily demand of approximately 2,400 gallons and a maximum daily demand (MDD) of 5,400 gallons (calculated per California Waterworks Standards Section 64554b.3.(C)).

Source Adequacy

The new well must be constructed with a minimum 50 foot deep, 3 inch wide concrete annular seal to meet the requirements for Transient Non-Community water systems. A copy of the Well Completion Report providing information about the new well will be included with the water system application package at a future date.

Water Supply Capacity

Assuming a conservative well pumping cycle of 12 hours per day the new well must be capable of producing at least 7.5 gallons per minute to meet the water system's MDD. Furthermore, the water system must include a new storage tank that can store at least the MDD (5,400 gallons).

The yield of the new well must be tested upon completion to verify it is adequate. Testing must be performed in accordance with California Waterworks Standards Section 64554. Furthermore, we recommend that the water level, yield and drawdown in the well be monitored on an ongoing basis to detect any trends in changing water table levels and well yield so that alternate sources can be developed if needed

Water Quality Characterization

Prior to permitting and construction of the water system it will be necessary to perform a full panel of water quality testing that covers all parameters required by Napa County. The water treatment system must then be designed to reduce all required contaminant levels to below the regulatory maximum contaminant level (MCL) for each constituent. Based on our past experience with water quality in this area we expect that some level of treatment will be required to meet water quality standards and that it should generally be feasible to provide this treatment.

Consolidation Analysis

The subject parcel does not fall within the service area of a known existing public water system and thus consolidation is not feasible.

MANAGERIAL

Organization

Management and routine operation of the water system will be performed by the winery staff. One staff member will be responsible for performing sampling, reporting and keeping up to date records onsite in accordance with Napa County requirements. The winery staff person in charge of the water system will consult with water system specialists as needed if issues arise with any components of the water system.

Land Ownership

The well is located on the same property as the existing winery. This property is owned by Michael Keenan. Since the well and all water system components are to be located on the same property as the users of the water system (the winery and residences) no access or maintenance easements will be required.

Water Rights

The Robert Keenan Winery Water System will use groundwater from a non-adjudicated groundwater basin exclusively and is therefore not subject to water rights through the State Water Resources Control Board.

FINANCIAL

There will be no revenue generated by the water system.

The expected expenses for the water system can be broken down into initial startup cost and ongoing operational cost as shown below.

Startup Cost

Startup cost includes the new well and pump for the new well, water transmission piping, water storage tank, water treatment system equipment, booster pump and installation. The water treatment and storage equipment will be designed based on a full panel of water quality test results that will be performed on water from the new well. Based on previous experience we estimate that the cost for the well, well pump, water transmission piping, water storage tank, booster pump, water treatment system equipment and installation will be in the range of \$75,000 to \$100,000.

Actual costs will be dependent upon the results of the water quality testing and design of the water treatment system.

Annual Operating Cost

Annual operating cost for the water system will include cost for performing quarterly and annual water quality testing, equipment maintenance and replacement, replacement of consumable items and electrical service charges. The actual cost to operate and maintain the water system will be dependent on the final design of the water system. We estimate that the annual cost associated with operating and maintaining the water system will be in the range of \$5,000 to \$10,000 per year depending on final water system design.

Funding

The startup cost will be financed by the property owner. The winery's annual budget will include a line item for water system operation and maintenance cost to ensure finances are available to operate and maintain the water system throughout the life of the winery.

APPENDIX I: Robert Keenan Winery Water System Site Plan

