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Water Availability Analysis

WATER AVAILABILITY ANALYSIS

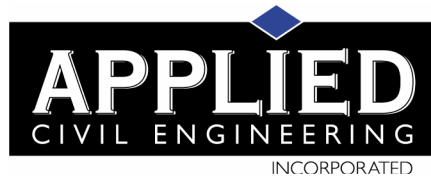
FOR THE

STEWART RANCH MICRO-WINERY

LOCATED AT:
2195 Golden Gate Drive
Napa, CA 94558
Former Napa County APNs 043-190-013 & 043-190-031 (PTN) (Winery) &
043-103-020 (Well)

PREPARED FOR:
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2/28/2025

Date

TABLE OF CONTENTS

LIST OF APPENDICES	iii
INTRODUCTION	I
ESTIMATED GROUNDWATER DEMAND.....	3
TIER 1 ANALYSIS.....	5
TIER 2 ANALYSIS.....	7
TIER 3 ANALYSIS.....	7
CONCLUSION.....	8

LIST OF APPENDICES

APPENDIX I: Water Use Estimate Supporting Calculations.....	9
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INTRODUCTION

Ailene Pritchett and Paul Tarap are applying for a Micro-Winery Use Permit to construct and operate a new micro-winery at the property located at 2195 Golden Gate Drive in Napa County, California. The subject property where the winery will be located is also known as former Napa County Assessor's Parcel Number 043-190-013 and a portion of former APN 043-190-031. A new APN will be assigned after recordation of the approved lot line adjustment (LLA 2107). Water is supplied by a well located on APN 043-103-020 which is located directly east of the subject property on the east side of State Route 29. It should be noted that there is a well on the subject property however it is dedicated to being used on an adjacent property owned by others via an easement so it is not used to meet the water demand on the subject property. Water from the well located on APN 043-103-020 is also used to irrigate vineyards on that property as well as adjacent APNs 043-103-021 and 043-103-022.

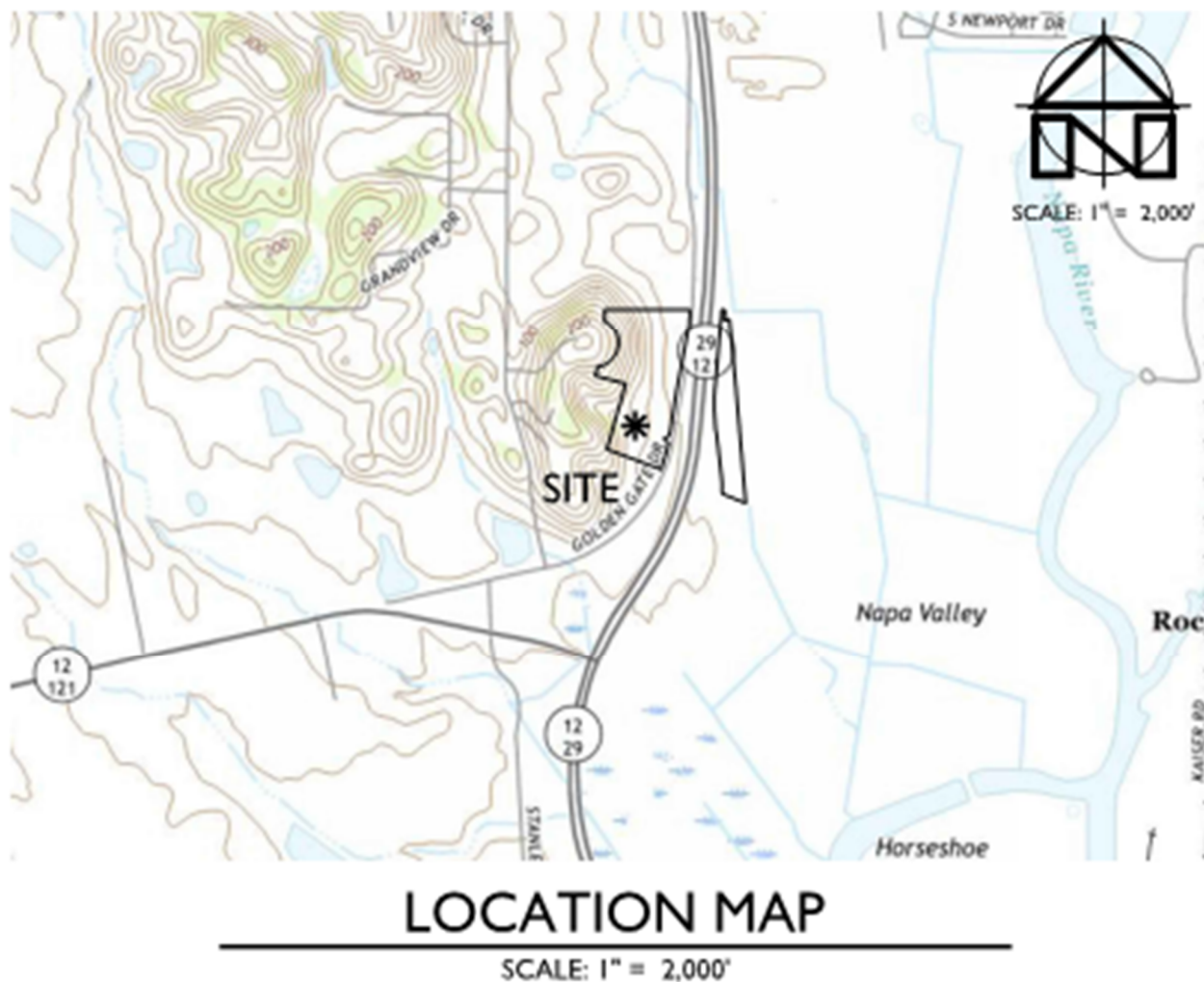


Figure 1: Location Map

The Micro-Winery Use Permit application under consideration proposes the construction and operation of a new micro-winery with the following characteristics:

- Wine Production:
 - 5,000 gallons of wine per year
 - Fermentation and aging onsite
- Employees:
 - One (1) full-time employee
 - One (1) part-time employee
- Marketing Plan:
 - Daily Tours and Tastings by Appointment
 - 10 visitors per day maximum

Existing improvements on the property include a main residence, guest cottage, ag and accessory residential buildings, a groundwater well, water tanks, paved, dirt and gravel driveways and the utility infrastructure associated with this type of rural residential and agricultural development.

Two existing structures will be modified to accommodate the proposed winery production and accessory functions. Please see the Stewart Ranch Micro-Winery Use Permit Conceptual Site Plans for approximate locations of existing and proposed facilities.

As previously noted, groundwater is currently used for vineyard irrigation, residential and pasture irrigation on the subject property as well as other nearby properties. This water is supplied by a well located on APN 043-103-020 which is located directly east of the subject property on the east side of State Route 29. Water from the well located on APN 043-103-020 is also used to irrigate vineyards on that property as well as adjacent APNs 043-103-021 and 043-103-022. There is no formal agreement for water use or obligation to continue to provide water to APNs 043-103-021 and 043-103-022 but they are nonetheless included in this analysis as that is the baseline existing condition.

It is planned that the well located on APN 043-103-020 will be the supply of water for the micro-winery and therefore that well is considered the “Project Well”.

It is noted that the Applicants are coordinating with Napa County to facilitate the Napa River Estuary Enhancement and Public Access Acquisition Project (P24-00037). As part of this project a portion of APN 043-103-020 (the well parcel) will be reduced in size and APNs 043-103-021 & -022 which contain vineyards that are currently irrigated with by the well on APN 043-103-020 will be sold to Napa County and all vineyard will be removed. The well will be retained by the Applicants for their exclusive use. In order to partially offset the vineyard lost due to the property sale the Applicants have planted 0.4 acres of grape vines on the winery parcel. The new grapes are located on slopes <5% as determined by HDVine LLC.

Ailene Pritchett and Paul Tarap have requested that Applied Civil Engineering Incorporated (ACE) prepare a Tier I Water Availability Analysis in accordance with the Water Availability Analysis (WAA) – Guidance Document adopted by the Napa County Board of Supervisors on May 12,

2015 as updated by the Interim Napa County Well Permit Standards and WAA Requirements – January 2024. The remainder of this report describes the estimated groundwater demand on the subject property for existing and proposed conditions and compares that to the prescribed water use screening criteria (Tier 1 Analysis) and also addresses the project’s compliance with Teir 2 and Tier 3 requirements.

ESTIMATED GROUNDWATER DEMAND

Groundwater is currently used to irrigate approximately 35 acres of vineyard, 2 acres of lawn and irrigated pasture and for residential purposes as shown in Figure 2.

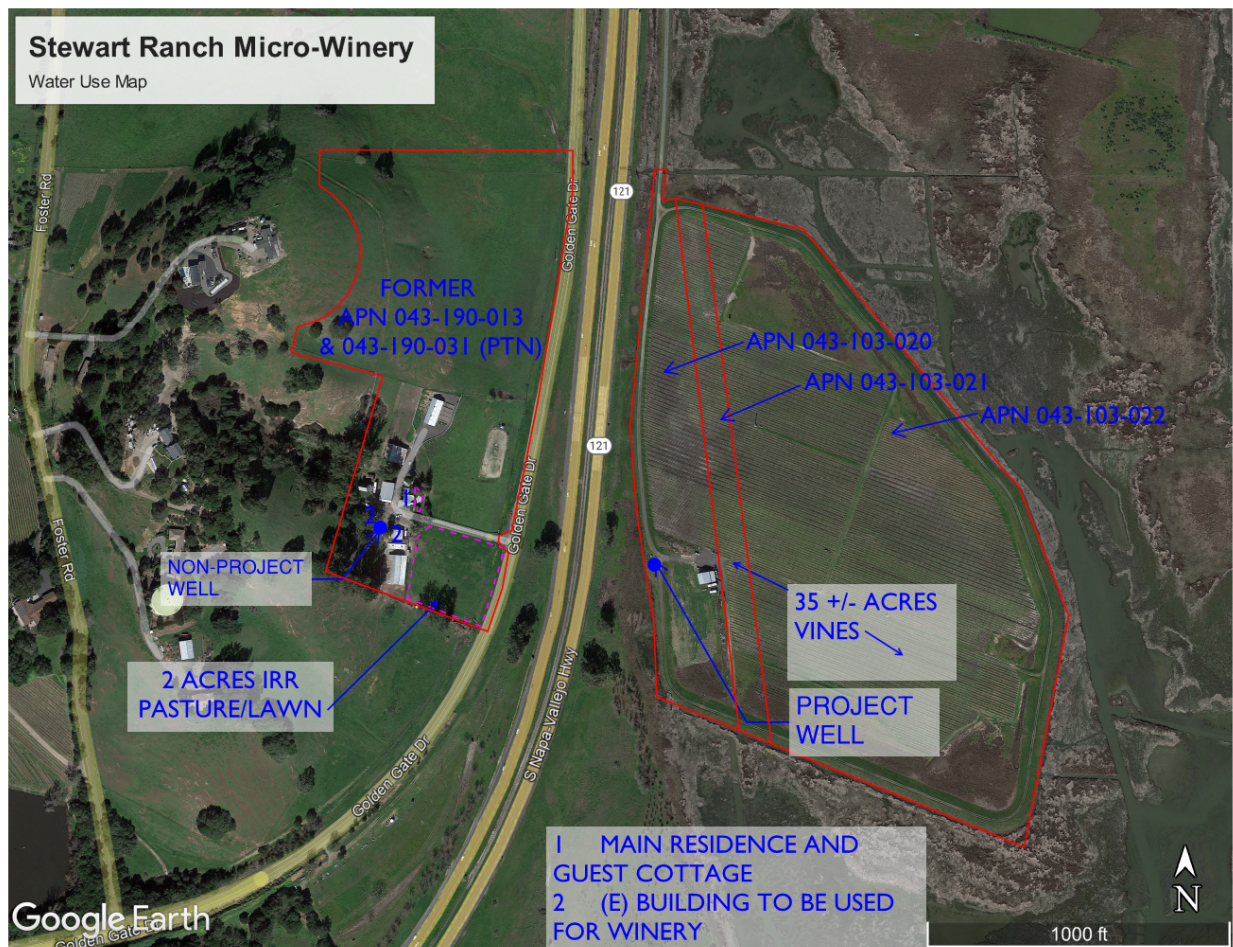


Figure 2: Existing Water Use Map

Proposed water use will include all existing uses with the exception that all 35 acres of vineyard on APNs 043-103-020, -021 & -022 will be removed. Proposed water use will also include the proposed micro-winery facility plus the newly planted 0.4 acres of vines on the winery parcel as shown in Figure 3.

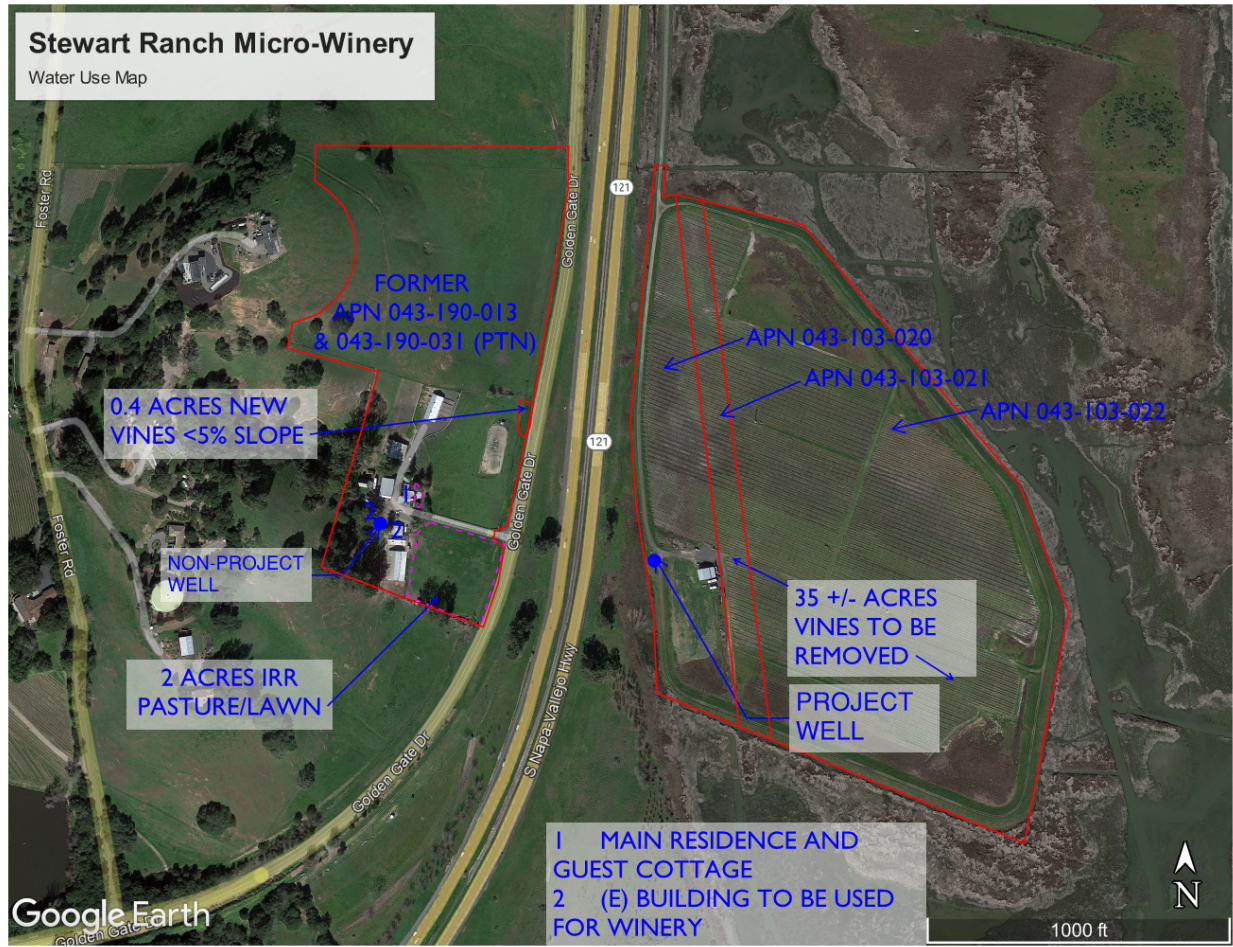


Figure 3: Proposed Water Use Map

The estimated groundwater demand is summarized in the table below and details of the calculations supporting these estimates are included in the Water Use Estimate Supporting Calculations in Appendix I.

Table I: Estimated Groundwater Demand

	Existing (ac-ft/yr)	Proposed (ac-ft/yr)
Residential	0.7	0.7
Winery	0	0.18
Vineyard Irrigation	17.50	0.20
Lawn & Pasture Irrigation	7.84	7.84
Total	26.04	8.92

TIER I ANALYSIS

Since all water is extracted from the Valley Floor area this project will be analyzed according to Valley Floor area requirements. According to the Napa County WAA - Guidance Document properties located in the Napa Valley Floor area are subject to a Water Use Screening Criteria of 1.0 acre-feet of water per acre of land per year. A project complies with the requirements of the Tier I WAA if the total water use on the property is less than 1.0 acre-feet per acre per year.

Furthermore, Napa County is now also requiring that properties in the Napa Valley Floor area limit groundwater use to a Reduced Water Use Screening Criteria of 0.3 acre-feet per acre per year due to extended drought conditions except on properties where current use is more than 0.3 acre-feet per year in which case no-net increase in water use beyond existing baseline conditions is the applicable screening criteria.

The Project Well, and the parcel it is located on as well as the two adjacent properties that the well currently provides vineyard irrigation to are all located in the Napa Valley Subbasin (#2-002.01) per CA DWR Bulletin 118 as shown in Figure 4.

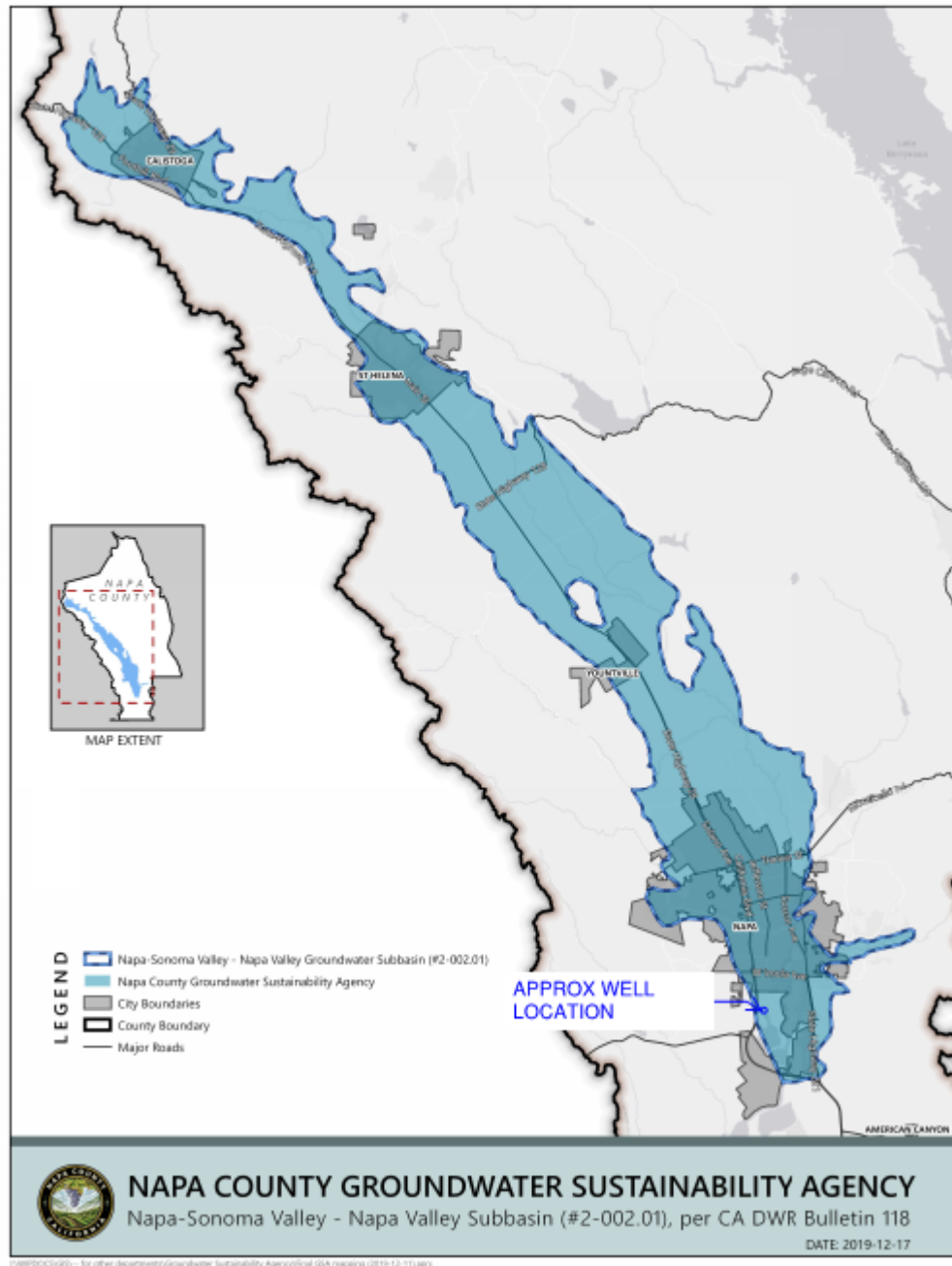


Figure 4: Map of Napa Valley Subbasin (#2-002.01)
 (Source Napa County Groundwater Sustainability Agency)

The parcel sizes according to the Napa County Assessor's Parcel Maps are summarized below:

APN 043-103-020	8.48 +/- acres
APN 043-103-021	4.39 +/- acres
APN 043-103-022	40.06 +/- acres
Total	52.93 +/- acres

Note that the subject parcel where the winery will be located is not located within the Napa Valley Floor area and is therefore conservatively not included in this analysis for potential recharge. The total parcel acreage within the Napa Valley Floor area is approximately 52.93 acres and therefore the water use screening criteria is calculated as follows:

WAA Guidance Document Water Use Screening Criteria = 52.93 acres x 1.0 acre-foot per acre per year

WAA Guidance Document Water Use Screening Criteria = 52.93 acre-feet per year

Reduced Water Use Screening Criteria = 52.93 acres x 0.3 acre-feet per acre per year

Reduced Water Use Screening Criteria = 15.88 acre-feet per year

The total Estimated Water Use for existing conditions (26.04 ac-ft/yr) and proposed conditions (8.92 ac-ft/yr) are both significantly less than the WAA Water Use Screening Criteria (52.93 ac-ft/yr) and the existing use is more than the Reduced Water Use Screening Criteria (15.88 ac-ft/yr).

Since the existing water use is already above the Reduced Water Use Screening Criteria the project must comply with the no net increase criteria and the proposed water use must be the same or less than the current water use (26.04 ac-ft/yr).

TIER 2 ANALYSIS

There are no known wells within 500' of the existing well and therefore a Tier 2 Analysis is not required. Furthermore, according to the Interim Napa County Well Permit Standards and WAA Requirements – January 2024 a Tier 2 Analysis is not required for projects like this one that do not increase water use.

TIER 3 ANALYSIS

According to the Interim Napa County Well Permit Standards and WAA Requirements – January 2024 a Tier 3 Analysis is required since the project well is located within 1,500 feet of a significant stream. However, the requirements state that the Tier 3 Analysis is not required if modifications to the location, construction, or operations of the project well(s) are made to reduce harm relative to current conditions based on the conclusions by a qualified professional. By reducing the total volume of groundwater from 26.04 ac-ft/year to 8.92 ac-ft/year the operations of the

project well will be changed in a manner that reduces potential harm relative to current conditions. This is based on the fact that reduced pumping duration, resulting from reduced pumping volume, will lessen drawdown and potential for interference with stream flows.

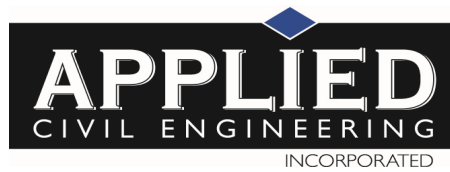
CONCLUSION

The project complies with the WAA Water Use Screening Criteria of 1.0 acre foot per acre per year of groundwater use but this criteria has been superseded by a new Reduced Water Use Screening Criteria. The property currently uses more than the Reduced Water Use Screening Criteria of 0.3 acre-feet per year and therefore the proposed project must not increase water use beyond current levels. Since 35 acres of vineyard that are currently irrigated by the project well are being removed and only 0.4 acres of new vineyard will be irrigated the project results in a net decrease in water use.

Tier 2 Analysis is not required since there are no wells within 500 feet of the project well.

Tier 3 Analysis is also not required because the proposed conditions with a significant reduction in pumping volume will alter the project well operations to reduce potential harm relative to existing conditions.

APPENDIX I: Water Use Estimate Supporting Calculations



**Stewart Ranch Winery
Groundwater Use Estimate**

	Estimated Water Use (Acre-Feet / Year)		
	Existing		Proposed
Residential Water Use			
Primary Residence ⁽¹⁾	0.500		0.500
Pool ^(1A) - Not Applicable	0.000		0.000
Second Dwelling Unit - Not Applicable	0.000		0.000
Guest Cottage - Not Applicable	0.200		0.200
Total Residential Domestic Water Use	0.700		0.700
Winery Domestic & Process Water Use			
Winery - Daily Visitors ⁽²⁾⁽³⁾	0.000		0.034
Winery - Events with Meals Prepared Onsite ⁽²⁾⁽⁴⁾	0.000		0.000
Winery - Events with Meals Prepared Offsite ⁽²⁾⁽⁵⁾	0.000		0.000
Winery - Employees ⁽²⁾⁽⁶⁾	0.000		0.034
Winery - Event Staff ⁽²⁾⁽⁶⁾	0.000		0.000
Winery - Process ⁽²⁾⁽⁷⁾	0.000		0.108
Total Winery Water Use	0.000		0.175
Irrigation Water Use			
Lawn / Irrigated Pasture ⁽⁸⁾	7.841		7.841
Other Landscape ⁽⁹⁾	0.000		0.000
Vineyard - Irrigation ⁽¹⁰⁾	17.500		0.200
Vineyard - Frost Protection - Not Applicable	0		0
Vineyard - Heat Protection - Not Applicable	0		0
Total Irrigation Water Use	25.341		8.041
Total Combined Water Use	26.04		8.92

Estimates per Napa County Water Availability Analysis - Guidance Document, May 12, 2015 unless noted

⁽¹⁾ 0.5 to 0.75 ac-ft/yr for Primary Residence, includes some landscaping per Napa County WAA Guidance Document

^(1A) 0.1 ac-ft/yr for pool without cover per Napa County WAA Guidance Document

⁽²⁾ See attached Winery Production, Guest, Employee and Event Staff Statistics

⁽³⁾ 3 gallons of water per guest per Napa County WAA Guidance Document

⁽⁴⁾ 15 gallons of water per guest per Napa County WAA - Guidance Document

⁽⁵⁾ 5 gallons of water per guest used because all food preparation, dishwashing, etc. to occur offsite

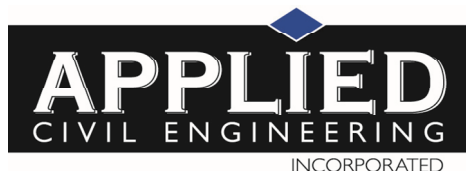
⁽⁶⁾ 15 gallons per shift per Napa County WAA - Guidance Document

⁽⁷⁾ 2.15 ac-ft per 100,000 gallons wine per Napa County WAA - Guidance Document

⁽⁸⁾ 0.1 ac-ft/yr per 1,000 sf of lawn per Napa County WAA - Guidance Document - 1.8 ac lawn & irrigated pasture

⁽⁹⁾ Existing landscape around house included in residential estimate above

⁽¹⁰⁾ 0.5 ac-ft/ac per Napa County WAA - Guidance Document - 35 acres of vineyard for existing and 0.4 acres of vineyard for proposed



Stewart Ranch Micro-Winery
Winery Production, Visitor, Employee & Event Staff Statistics

Winery Production⁽¹⁾	5,000	gallons per year
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Tours and Tastings by Appointment⁽¹⁾

Monday through Thursday	10 guests max per day	
Friday through Sunday	10 guests max per day	
Total Guests Per Year		3,640

Events - Meals Prepared Offsite⁽¹⁾

0 per year	0 guests max	0
0 per year	0 guests max	0
0 per year	0 guests max	0
Total Guests Per Year		0

Events - Meals Prepared Onsite⁽¹⁾

0 per year	0 guests max	0
0 per year	0 guests max	0
0 per year	0 guests max	0
Total Guests Per Year		0

Winery Employees⁽²⁾

2 employees (1 FT / 1 PT)	1 shift per day	
Total Employee Shifts Per Year		730

Event Staff⁽³⁾

0 per year, 0 guests	0 event staff	0
0 per year, 0 guests	0 event staff	0
0 per year, 0 guests	0 event staff	0
Total Event Staff Per Year		0

⁽¹⁾ Winery production, tours and tasting and event guest statistics per Winery Use Permit Application

⁽²⁾ Employee counts per Winery Use Permit Application

⁽³⁾ Assumes 1 event staff per 10 guests (in addition to regular winery employees)