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Water Availability Analysis

Envy Wines Winery
Major Modification P18-00071-MOD & RSS Exception
Planning Commission Hearing Date – October 16, 2019



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Napa County Planning, Building
& Environmental Services

WATER AVAILABILITY ANALYSIS

ENVY WINES

1170 TUBBS LANE, CALISTOGA, CA 94515

APN: 017-210-027

FEBRUARY 12, 2018



PREPARED BY:

MADRONE ENGINEERING

1485 MAIN STREET, SUITE 302

ST. HELENA, CA 94574



TABLE OF CONTENTS

I.	INTRODUCTION & GENERAL OVERVIEW.....	3
A.	INTRODUCTION	3
B.	PROJECT DESCRIPTION	3
II.	TIER 1 ANALYSIS	4
A.	WATER USE GUIDELINES	4
B.	EXISTING WATER USAGE.....	5
C.	PROPOSED WATER USAGE	6
D.	WATER SUPPLY CAPACITY	7
III.	TIER 2 ANALYSIS	8
IV.	CONCLUSION.....	8



I. Introduction & General Overview

A. Introduction

Madrone Engineering has prepared this report to assist the Envy Wines project with compliance with Napa County Water Availability Analysis requirements. As of May 13, 2015, a water availability analysis is required for any discretionary project that may utilize groundwater or will increase the intensity of groundwater use of any parcel through an existing, improved, or new water supply system (Napa County Code 13.15.010).

B. Project Description

Envy Wines is requesting a Use Permit Modification to increase wine production from 50,000 gallons to 100,000 gallons per year on an 18.76-acre parcel located at 1170 Tubbs Lane. No changes to existing buildings or parking areas are proposed. Other improvements include widening the existing driveway to meet Napa County Road & Street Standards.

Based on the proposed marketing plan for the winery, the maximum number of winery staff on-site on any given day is estimated to be two (2) full-time and two (2) part-time employees. In addition to the employees, the proposed marketing plan allows for up to thirty (30) visitors per day in addition to winery special events. Other water use on the parcel includes minimal amounts of vineyard irrigation (a portion of the vineyard is irrigated with recycled wastewater).

There are three wells available for project use, and all are shown on the well exhibit (Appendix B). One well (well #01) is permitted as a source for a transient, non-community water system, and the other wells are used for vineyard irrigation. All wells are on a neighboring parcel (APN: 017-210-009), and both wells are connected to Envy Wines via an existing well and utility easement. The winery parcel is zoned AP (Agricultural Preserve), and is on the Napa Valley Floor. Based on Table 1, below, the project will be subject to Tier 1 analysis requirements.

Table 1: Project Screening Criteria Applicability

Tier	Criteria Type	Napa Valley Floor	MST	All Other Areas
1	Water Use	Yes	Yes	Yes
2	Well and Spring Interference	No ¹	No ¹	Yes
3	Groundwater/Surface Water Interaction	No ¹	No ¹	No ¹

1. Further analysis may be required under CEQA if substantial evidence, in the record, indicates a potentially significant impact may occur from the project.



II. Tier 1 Analysis

Tier 1 of the WAA requests the applicant to estimate the proposed water usage for the project, and then compare the estimated parcel usage for the property to the applicable water use criteria. As noted in Table 2A of the WAA guidelines (see below), the water use criteria is subject to the parcel location.

Table 2A: Water Use Criteria

Project parcel location	Water Use Criteria (acre-feet per acre per year)
Napa Valley Floor	1.0
MST Groundwater Deficient Area	0.3 or no net increase, whichever is less ¹
All Other Areas	Parcel Specific ²
1. Does not apply to the Ministerial Exemption as outlined in the Groundwater Conservation Ordinance 2. Water use criteria for project shall be considered in relation to the average annual recharge available to project property, as calculated by the applicant or their consultant.	

A. Water Use Guidelines

Appendix B of the WAA guidelines includes recommendations for determining the estimated water use for specified land uses. A summary of these guidelines, including the values applied in this report, are identified in the table below:



Table 3: Water Use Guidelines per WAA Appendix B

Use	Recommended Water Use Values	Applied Water Use Values	Unit
Residence	0.5 to 0.75	not used	AF per Year
Winery			
Process Water	0.0215	0.0215	AF per 1,000 gal Wine Produced per Year
Domestic Water	0.005	0.005	AF per 1,000 gal Wine Produced per Year
Employees	15	15	Gallons Per Shift
Tasting Room Visitation	3	3	Gallons Per Visitor
Events and Marketing	15	15	Gallons Per Visitor
Vineyards			
Irrigation Only	0.2 to 0.5	0.2	AF per Acre Planted per Year
Heat Protection	0.25	not used	AF per Acre Planted per Year
Frost Protection	0.25	not used	AF per Acre Planted per Year
Landscaping	-	not used	landscaping is included in the residence

B. Existing Water Usage

The current water uses on the Envy Wines property include the following:

Table 4: Existing Property Uses

Use	Value	Unit
Residence(s)	0	Main Residence
Winery		
Wine Produced	50	Thousand Gallons per Year
Employees (Full + Part Time)	2 FT, 2 PT	Employee Shifts per Day
Employees (Full + Part Time)	610	Employee Shifts per Year*
Visitors	30	Visitors per Day
Visitors	10800	Visitors per Year**
Event Visitors per Year	475	Visitors per Year
Landscaping	12000	square feet
Vineyards		
Acres Planted	9	Acres (irrigated by well)
Heat Protection	N/A	
Frost Protection	N/A	

* 5-day work weeks for Full-Time, 45 total days for Part-Time (harvest)

** Conservatively estimated at 360 days visitation per year



Based on Table 4, the existing water usage of the parcel is estimated as follows:

Table 5: Existing Water Usage

Residence	not used	AF per Year
Winery		
Process Water	1.075	AF per Year
Domestic Water + Landscaping	0.471	AF per Year
Employees	0.028	AF per Year
Visitors	0.100	AF per Year
Event Visitors per Year	0.003	AF per Year
Vineyards		
Irrigation Only	1.800	AF per Year
Heat Protection	0.000	AF per Year
Frost Protection	0.000	AF per Year
Total Water Usage	3.478	AF per Year

C. Proposed Water Usage

The proposed water uses under this Use Permit Modification for the Envy Wines property include the following:

Table 6: Proposed Property Uses

Use	Value	Unit
Residence	0	Main Residence
Winery		
Wine Produced	100	Thousand Gallons per Year
Employees (Full + Part Time)	2 FT, 2 PT	Employee Shifts per Day
Employees (Full + Part Time)	610	Employee Shifts per Year*
Visitors	30	Visitors Per Day
Visitors	10800	Visitors Per Year*
Event Visitors	475	Visitors Per Year
Landscaping	12000	square feet
Vineyards		
Acres Planted	9	Acres (irrigated by well)
Heat Protection	N/A	
Frost Protection	N/A	

* 5-day work weeks for Full-Time, 45 total days for Part-Time (harvest)

** Conservatively estimated at 360 days visitation per year



The purpose of the Use Permit Modification is to increase wine production from 50,000 gallons to 100,000 gallons per year. No additional vineyard will be planted.

Based on Table 6, the proposed water usage of the parcel is estimated as follows:

Table 7: Proposed Water Usage

Residence	not used	AF per Year
Winery		
Process Water	2.150	AF per Year
Domestic Water + Landscaping	0.721	AF per Year
Employees	0.028	AF per Year
Visitors	0.100	AF per Year
Event Visitors per Year	0.022	AF per Year
Vineyards		
Irrigation Only	1.800	AF per Year
Heat Protection	0.000	AF per Year
Frost Protection	0.000	AF per Year
Total Water Usage	4.821	AF per Year

See Table 8, below, for a summary of the change in water use from the existing condition to the proposed Use Permit condition.

Table 8: Proposed Increase in Water Usage

Existing Water Usage	3.478 AF per Year
Proposed Water Usage	4.821 AF per Year
Water Usage Increase	1.343 AF per Year

The increase in production and visitation has the potential to increase the water usage by ~1.343 acre-feet per year relative to existing usage. However, with a parcel size of 18.75 acres, and a water use criterion of 1.0 acre-feet per year per acre, the total allowable water usage could be as high as 18.75 acre-feet per year. The total proposed usage of 4.821 acre-feet per year is significantly less than allowable water usage for the parcel.

D. Water Supply Capacity

One well is available for use by the winery (see Appendix B, Well #01). Per a well yield test completed in 2009 (see public water system permit documents), Well #01 has a reliable pumping capacity of 50 gpm.

The proposed winery water use of 4.821 acre-feet per year equates to an average of ~4,300 gallons per day. At a constant rate of 3.0 gpm (only 6% of Well #01 capacity), approximately 4,300 gallons of water would be available each day. Therefore, project water use is well within the physical capabilities of Well #01.



III. Tier 2 Analysis

As required by the WAA guidelines, the project must be evaluated for the potential for well and/or spring interference, if the project is outside the Napa Valley Floor. However, the project well (#01) is on the Napa Valley Floor, therefore no evaluation of well/spring interference is proposed.

IV. Conclusion

This report demonstrates that the proposed project is in compliance with current County Code related to groundwater usage per the Napa County Water Availability Analysis guidelines.

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Envy Wines



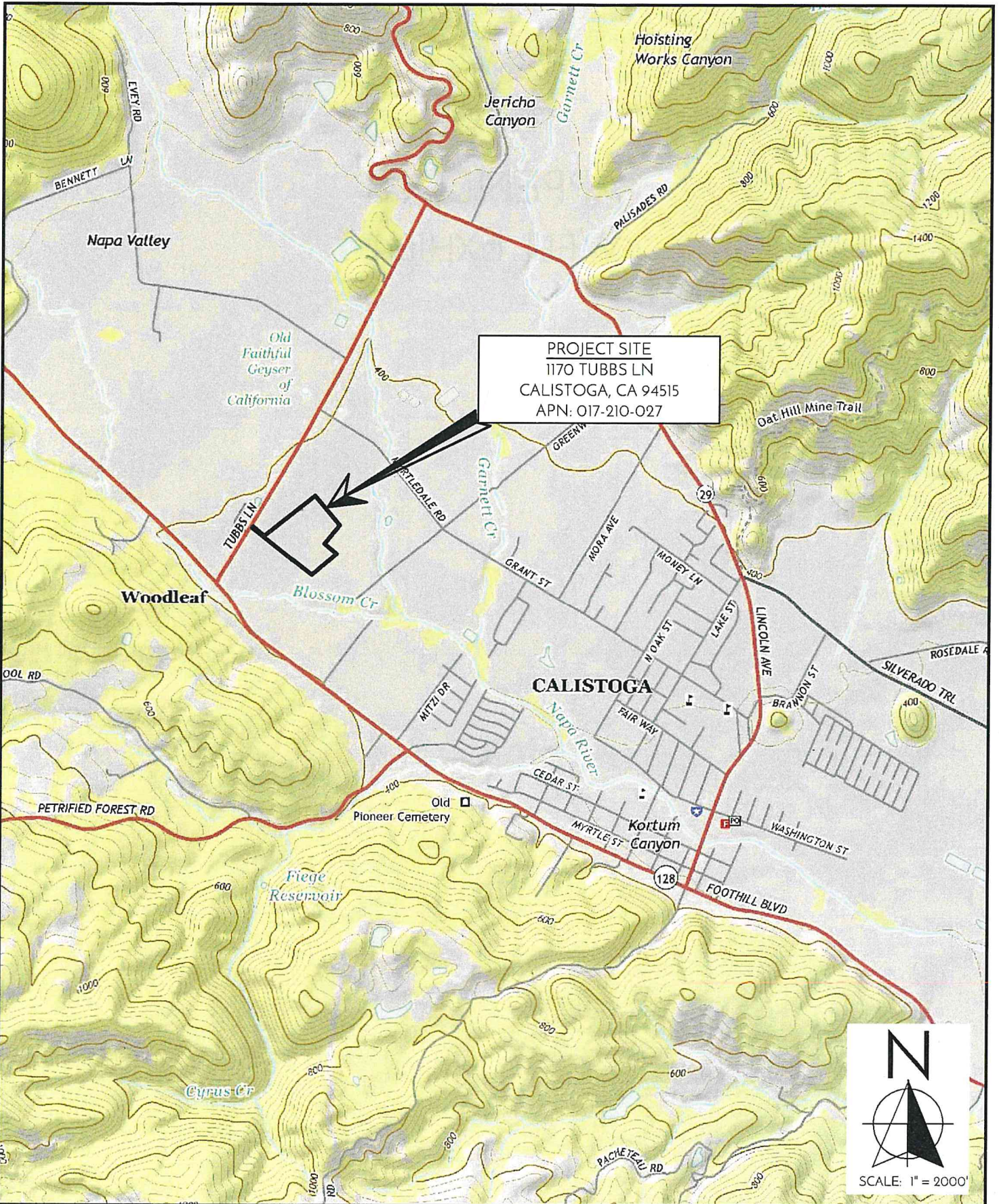
APPENDIX A VICINITY MAP

17.020
Envy Wines



APPENDICES

APPENDIX A: VICINITY MAP
APPENDIX B: WELL EXHIBIT



PROJECT SITE
 1170 TUBBS LN
 CALISTOGA, CA 94515
 APN: 017-210-027



ENVY WINES
 VICINITY MAP



1485 MAIN ST., SUITE 302
 ST. HELENA, CA 94574
 (707) 302-6280

DATE	02/12/2018
SCALE	1" = 2,000'
JOB #	17.020
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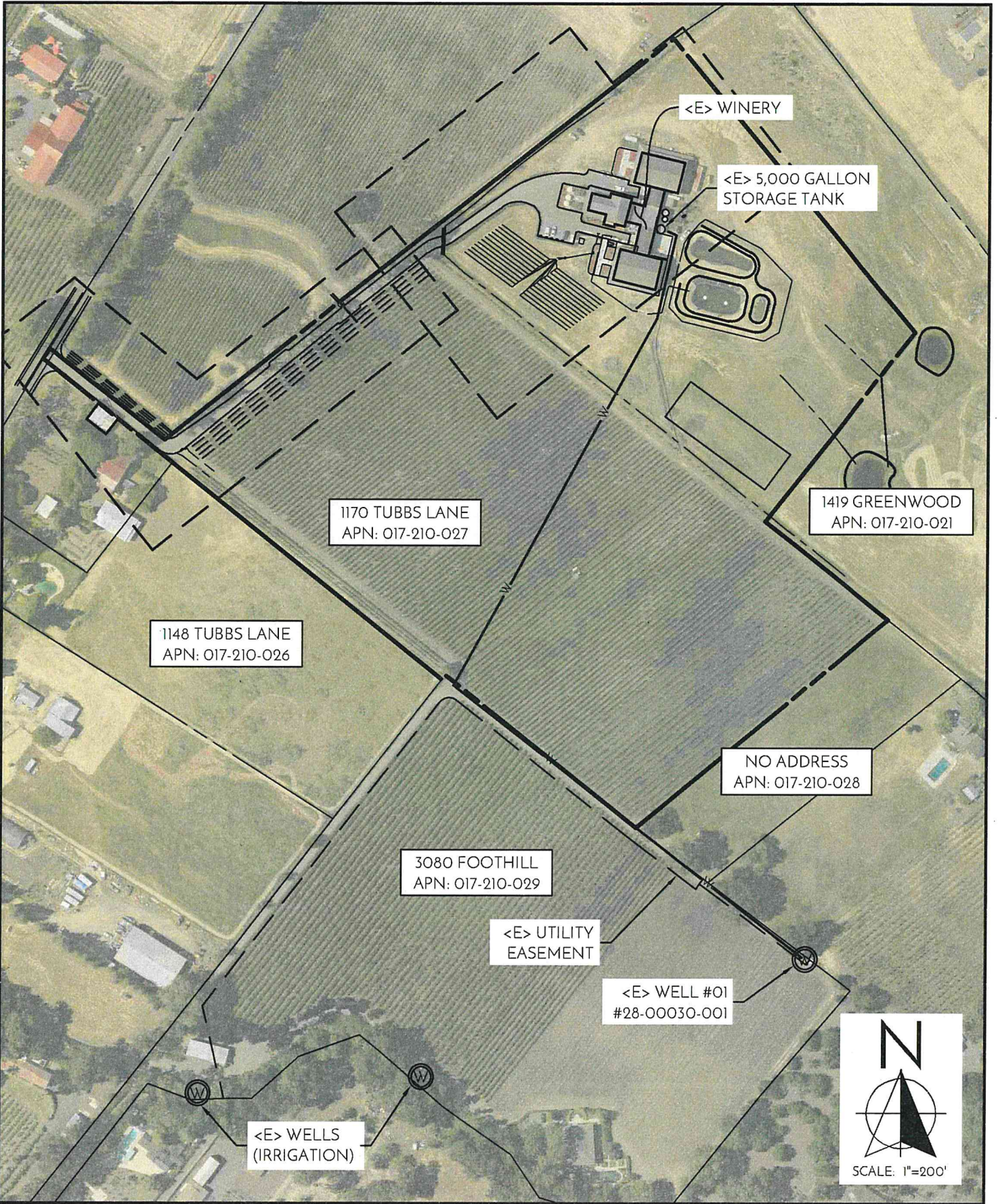
SHEET	1
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Envy Wines



APPENDIX B

WELL EXHIBIT



ENVY WINES WELL EXHIBIT



1485 MAIN ST., SUITE 302
ST. HELENA, CA 94574
(707) 302-6280

DATE:	02/12/2018	SHEET	1
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JOB #	17.020		
APN:	017-210-027		

