



June 30, 2023
May 3, 2024 Revision #1
November 22, 2024 Revision #2
February 5, 2025 Revision #3
February 18, 2025 Revision #4
February 28, 2025 Revision #5

Job No. 11-121

Brian Bordona, Director
Napa County Planning, Building and Environmental Services Department
1195 Third Street, Suite 210
Napa, CA 94559

Re: Fantesca Estate Winery Use Permit Modification – Water Availability Analysis
2920 Spring Mountain Road, St. Helena, Napa County, CA APN 022-250-008

Dear Mr. Bordona:

Fantesca Estate Winery is applying for a Use Permit Modification to allow the construction and operation of three (3) new buildings that will function as tasting spaces to host guests. The project proposes three small structures along with the associated access infrastructure. The project does not propose any change to the currently approved wine production level, employee numbers, or visitation and marketing numbers.

Tier I Water Demand Analysis

Existing water use on the property includes water use for the winery, the existing landscaping and the existing vineyard irrigation. The existing residence is serviced with water from the City of St. Helena and thus is not included in this demand analysis. The attached water use spreadsheet calculates total existing water demand to be 9.42 af-ft/year.

The project purposes to add new landscaping which totals approximately 7,435 square feet and consists of low and moderate water use plants. Estimated water use for this new landscaping is approximately 0.23 acre feet of water per year based on the irrigation calculations prepared along with the landscape plans. Since no operational parameters are proposed to be modified, the only change in water use associated with this project is related to irrigation. While there is a slight increase in new landscape irrigation demand there is also a slight reduction in vineyard irrigation demand because the newly proposed improvements will slightly reduce the vineyard acreage by approximately 0.5 acres as shown on the project site plan. This correlates to a reduction in vineyard irrigation demand of 0.25 acre feet per year (0.5 acres x 0.5 ac-ft/acre/year). Therefore, the net impact of this project slightly reduces the overall groundwater use on the property (0.25 – 0.23 = 0.02 acre feet per year savings).

The attached water use spreadsheet calculates total proposed water demand to be 9.40 ac-ft/year.

Since the project results in a slight overall reduction in groundwater use, no further analysis is required to satisfy Tier 1 criteria.

Tier 2 Well and Spring Interference Analysis

There is no planned increase in water use and therefore a Tier 2 Well and Spring Interference analysis is not required according to current County guidelines. Furthermore, the nearest neighboring well is located over 830' from the project well.

Tier 3 Well to Stream Interference Analysis

The well that supplies water to the winery is located outside of the 1,500' significant stream buffer zone as shown in the image below:



Since the well is more than 1,500' from all significant streams a Tier 3 analysis is not required.

Other Wells

It is acknowledged that there are two other wells on the property and a permit for another new well has been applied for and is pending (E22-00250). According to the property owner, the other existing wells service the irrigation needs on the property and do not service the winery. Similarly, the proposed new well will also service existing irrigation needs. Therefore, the other existing wells and proposed new well are not included in the Tier 2 / Tier 3 analysis requirements. The owner understands that if any of the existing or proposed new wells are desired to service

the winery in the future then they will have to be analyzed and an appropriate modification to the use permit will be required.

If you have any questions, please feel free to contact us at (707) 320-4968.

Sincerely,

Applied Civil Engineering Incorporated

By:

Michael R. Muelrath

Michael R. Muelrath RCE 67435

Principal



Enclosures:

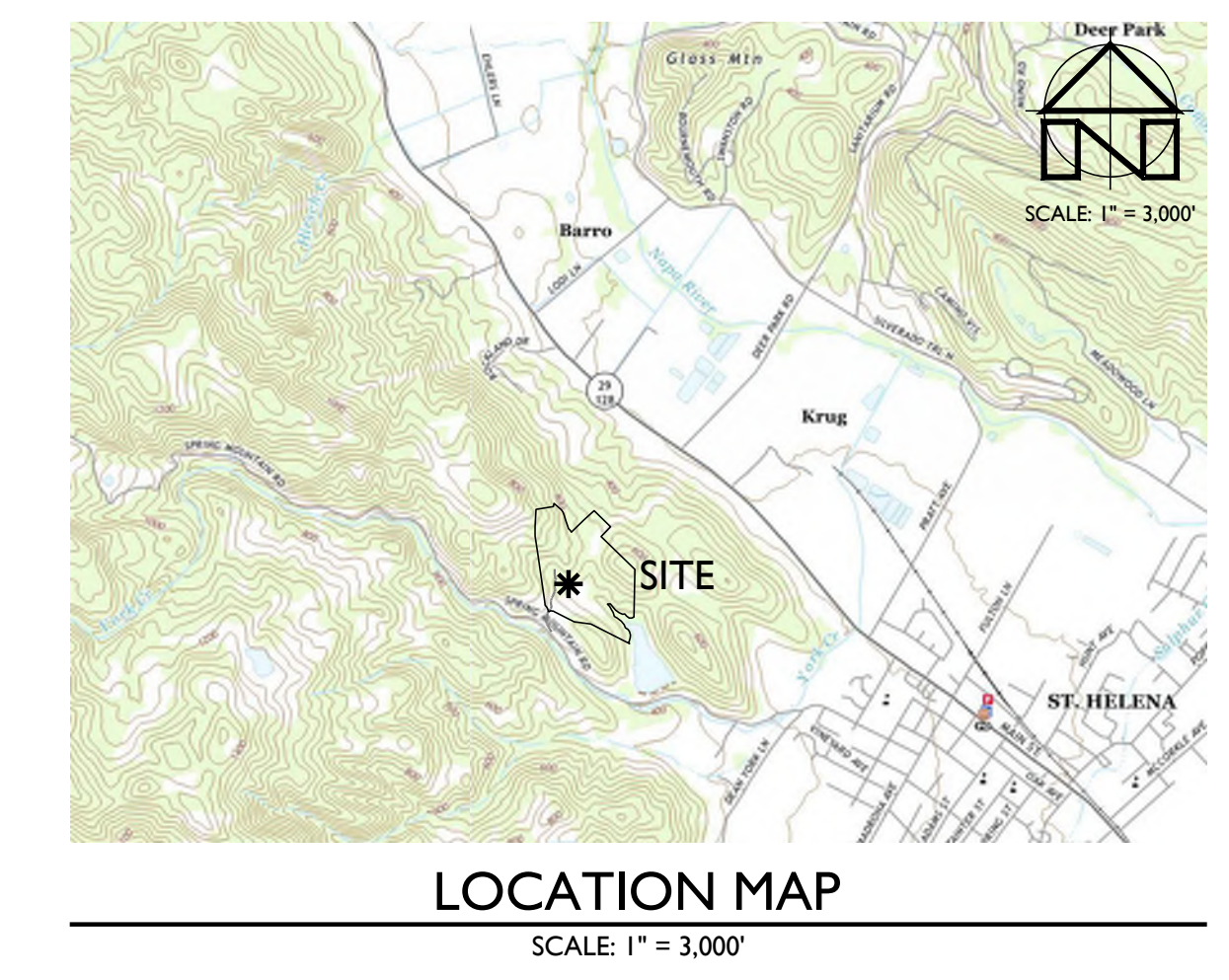
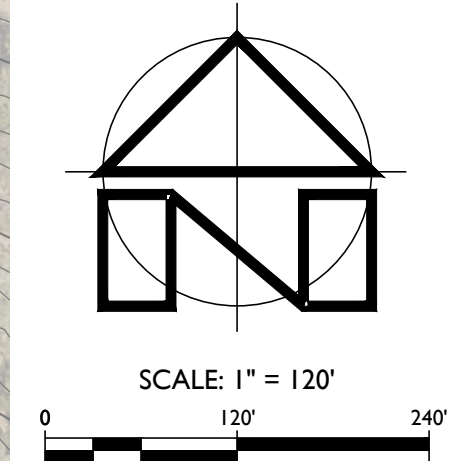
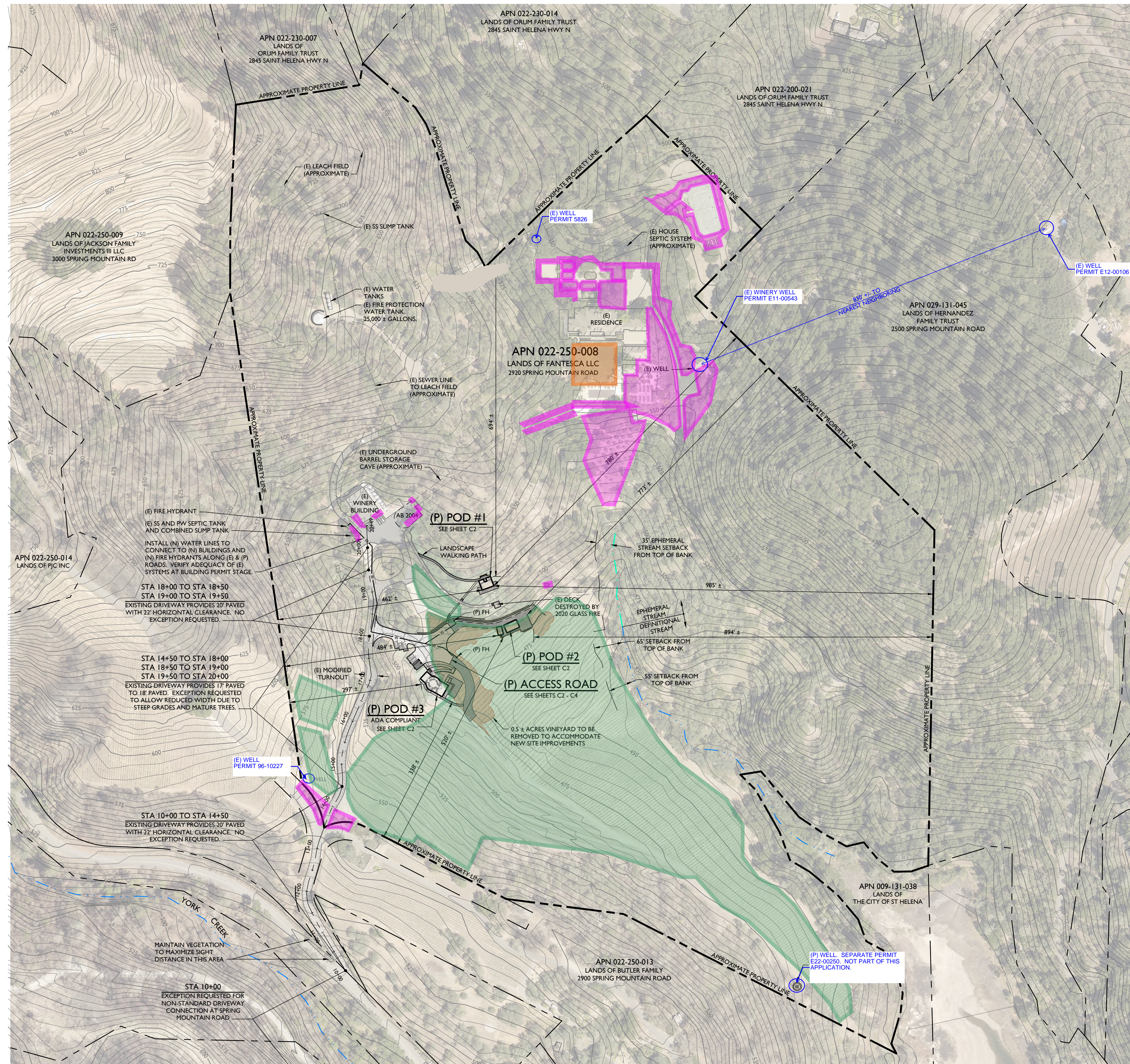
Fantesca Winery Water Use Map
Water Use Calculation Spreadsheet
Landscape Plan with Irrigation Use Calculations

Copy (via email):

Duane Hoff, Fantesca Estate & Winery
Chelsea Hoff, Fantesca Estate & Winery
Donna Oldford, Plans4Wine

FANTESCA WINERY

WATER USE MAP

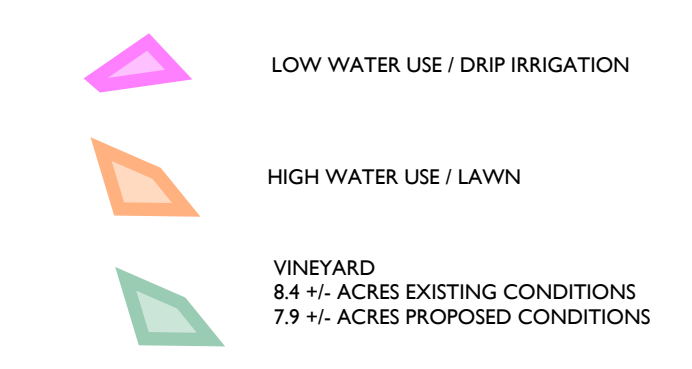


PROJECT INFORMATION:
PROPERTY OWNER & APPLICANT:
 FANTESCA LLC
 6600 FRANCE AVENUE SOUTH, SUITE 550
 MINNEAPOLIS, MN 55435
SITE ADDRESS:
 2920 SPRING MOUNTAIN ROAD
 SAINT HELENA, CA 94574
ASSESSOR'S PARCEL NUMBER:
 022-250-008
PARCEL SIZE:
 52.6 ± ACRES

IRRIGATION AREA SUMMARIES

WINERY SITE:
 NON-LOW / LOW WATER USE ON DRIP: 4,600 +/- SF
 LAWN: 0 SF

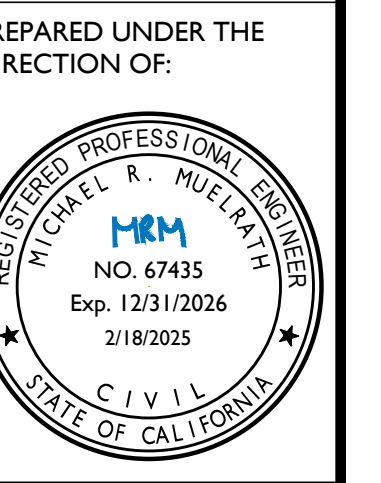
RESIDENCE SITE:
 NON-LOW / LOW WATER USE ON DRIP: 65,500 +/- SF
 LAWN: 8,500 +/- SF



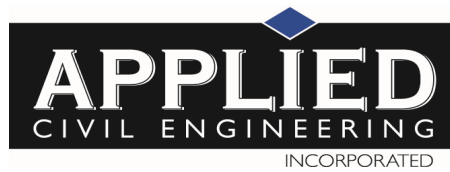
NOTES:

- FADED BACKGROUND REPRESENTS EXISTING TOPOGRAPHIC FEATURES. TOPOGRAPHIC INFORMATION ON SHEET C1 WAS TAKEN FROM THE NAPA COUNTY GEOGRAPHIC INFORMATION SYSTEM DATABASE. TOPOGRAPHIC INFORMATION ON OTHER SHEETS WAS TAKEN FROM THE "TOPOGRAPHIC MAP OF A PORTION OF THE LANDS OF FANTESCA LLC" PREPARED BY TERRA FIRMA SURVEYS, INC., DATED JULY 2022. APPLIED CIVIL ENGINEERING INCORPORATED ASSUMES NO LIABILITY REGARDING THE ACCURACY OR COMPLETENESS OF THE TOPOGRAPHIC INFORMATION.
- AERIAL PHOTOGRAPH IS NADIR IMAGES CAPTURED BY PICTOMETRY INTERNATIONAL DATED JULY 15, 2021 AND MAY NOT REPRESENT CURRENT CONDITIONS.
- CONTOUR INTERVAL:
 SHEET C1: FIVE (5) FEET, HIGHLIGHTED EVERY TWENTY FIVE (25) FEET.
 OTHER SHEETS: ONE (1) FOOT, HIGHLIGHTED EVERY FIVE (5) FEET.
- VERTICAL DATUM: NAVD 88D
- THE PROPERTY LINES SHOWN ON THESE PLANS DO NOT REPRESENT A BOUNDARY SURVEY. THEY ARE APPROXIMATE AND ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

WATER USE MAP
SCALE: 1" = 120'



DRAWN BY:	PowerCAD LLC
CHECKED BY:	MRM
DATE:	FEBRUARY 18, 2025
REVISIONS:	BY:
JOB NUMBER:	11-121
FILE:	11-121CONC-OSP.DWG
ORIGINAL SIZE:	24" X 36"
SHEET NUMBER:	CI OF 1

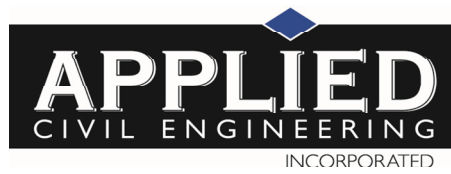


**Fantesca Estate Winery
Groundwater Use Estimate**

	Estimated Water Use (Acre-Feet / Year)	
	Existing	Proposed
Residential Water Use		
Primary Residence ⁽¹⁾	0.000	0.000
Pool ⁽¹⁾	0.000	0.000
Second Dwelling Unit - Not Applicable	0.000	0.000
Guest Cottage ⁽¹⁾	0.000	0.000
Total Residential Domestic Water Use	0.000	0.000
Winery Domestic & Process Water Use		
Winery - Daily Visitors ⁽²⁾⁽³⁾	0.048	0.048
Winery - Events with Meals Prepared Onsite ⁽²⁾⁽⁴⁾	0.000	0.000
Winery - Events with Meals Prepared Offsite ⁽²⁾⁽⁵⁾	0.018	0.018
Winery - Employees ⁽²⁾⁽⁶⁾	0.151	0.151
Winery - Event Staff ⁽²⁾⁽⁶⁾	0.006	0.006
Winery - Process ⁽²⁾⁽⁷⁾	0.645	0.645
Total Winery Water Use	0.868	0.868
Irrigation Water Use		
Existing Lawn ⁽⁸⁾	0.850	0.850
Existing Other Landscape ⁽⁹⁾	3.505	3.505
New Landscape ⁽¹⁰⁾	0.000	0.230
Vineyard - Irrigation ⁽¹¹⁾	4.200	3.950
Vineyard - Frost Protection - Not Applicable	0	0
Vineyard - Heat Protection - Not Applicable	0	0
Total Irrigation Water Use	8.555	8.535
Total Combined Water Use	9.42	9.40

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

- ⁽¹⁾ All domestic water use at residential complex is served by City of St. Helena water system. No groundwater used for domestic.
- ⁽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 - 8,500 +/- sf lawn
- ⁽⁹⁾ 0.1 ac-ft/yr per 2,000 sf of landscape per Napa County WAA - Guidance Document - 70,100 sf estimated
- ⁽¹⁰⁾ 0.23 ac-ft/yr for new landscaping per MWELo calculations on landscape plans
- ⁽¹¹⁾ 0.5 ac-ft/ac per Napa County WAA - Guidance Document - 8.4 acres of vineyard existing, 7.9 acres proposed (0.5 acres removed)



Fantesca Estate - Existing Conditions
Winery Production, Visitor, Employee & Event Staff Statistics

Winery Production⁽¹⁾ 30,000 gallons per year

Tours and Tastings by Appointment⁽¹⁾

Daily Max	18 guests max per day	
Weekly Max	100 guests max per week	
Total Guests Per Year		5,200

Events - Meals Prepared Offsite⁽¹⁾

36 per year	20 guests max	720
6 per year	60 guests max	360
1 per year	125 guests max	125
Total Guests Per Year		1,205

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⁾

9 employees	1 shift per day	
Total Employee Shifts Per Year		3,285

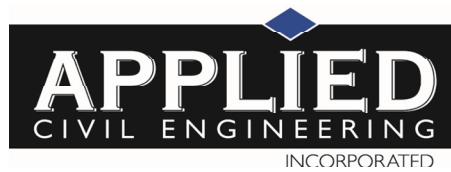
Event Staff⁽³⁾

36 per year, 20 guests	2 event staff	72
6 per year, 60 guests	6 event staff	36
1 per year, 125 guests	13 event staff	13
Total Event Staff Per Year		121

⁽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)



Fantesca Estate - Proposed Conditions
Winery Production, Visitor, Employee & Event Staff Statistics

Winery Production⁽¹⁾ 30,000 gallons per year

Tours and Tastings by Appointment⁽¹⁾

Daily Max	18 guests max per day	
Weekly Max	100 guests max per week	
Total Guests Per Year		5,200

Events - Meals Prepared Offsite⁽¹⁾

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FANTESCA WINERY - WATER USE ESTIMATION

WATER TYPE	POTABLE
SITE ETO=	43.8

REGULAR LANDSCAPE AREAS												
HYDROZONE #	HYDROZONE NAME	PLANT WATER USE TYPE	PLANT FACTOR (PF)	IRRIGATION METHOD	IRRIGATION EFFICIENCY	ETAF (PF/IE)	AREA (SQ. FT) (HA)	ETAF X AREA (HA)	ETWU (GAL/YR)	ACRE FEET/YEAR	HCF/ YEAR	PERCENTAGE OF LANDSCAPE
1	SHRUBS/GC	LOW	0.3	DRIP	0.81	0.370	2,409	892	24,229	0.07	32.39	32%
2	SUCCULENT	LOW	0.3	DRIP	0.81	0.370	1,086	402	10,923	0.03	14.60	15%
3	TREES	LOW	0.3	BUBBLER	0.81	0.370	2,960	1,096	29,771	0.09	39.80	40%
4	TREES	MOD	0.5	BUBBLER	0.81	0.617	80	49	1,341	0.00	1.79	1%
5	HYDROSEED	LOW	0.3	SPRAY	0.75	0.400	900	360	9,776	0.03	13.07	12%
TOTALS							7,435	2,800	76,040	0.23	101.66	100%

SPECIAL LANDSCAPE AREAS													
HYDROZONE #	HYDROZONE NAME							1					0%
-													
TOTALS							0					0%	

MAWA	GALLONS/YR	90,857
	ACRE FEET/YR	0.28
	HCF/YR	121.47

MAWA FORMULA
MAXIMUM APPLIED WATER ALLOWANCE (MAWA) GALLONS PER YEAR
$MAWA = (ET_o)(0.62)[(LA \times 0.45) + (0.55 \times SLA)]$

ET_o = REFERENCE EVAPOTRANSPIRATION
 0.55= ET ADJUSTMENT FACTOR
 LA=LANDSCAPED AREA (SQUARE FEET)
 0.62 = CONVERSION FACTOR (GALLONS/SQ.FT/YR)

ETWU FORMULA
ESTIMATED TOTAL WATER USE (ETWU) GALLONS PER YEAR
$ETWU = ((ETO)(.62)(ETAF \times LA))$

ET_o = REFERENCE EVAPOTRANSPIRATION
 PF = PLANT FACTOR FOR HYDROZONES
 HA = HYDROZONE AREA (SQ.FT)
 0.62 = CONVERSION FACTOR (GALLONS/SQ.FT/YR)

IE = IRRIGATION EFFICIENCY (0.81)-BUBBLER/DRIP
 IE = IRRIGATION EFFICIENCY (0.75)-ROTORS/SPRAY

ETWU	GALLONS/YR	76,040
	ACRE FEET/YR	0.23
	HCF/YR	101.66

SITE IRRIGATION EFFICIENCY	SITE PLANT FACTOR	MAWA COMPLIANT
67.6%	0.25	YES

ETAF Calculations	
REGULAR LANDSCAPE AREAS	
TOTAL ETAF x AREA	2,800
TOTAL AREA	7,435
AVG. ETAF	37.66%

Landscape Architect

swa

2200 Bridgeway
Sausalito, California
94965-1750
United States
www.swagroup.com
+1.415.332.5100 o

Consultant

Stamp

Revisions

- 1
- 2
- 3
- 4
- 5

Date
2023.06.XX
Phase

Job Number
FEWT201

0 10' 20'
1" = 20'

Drawing Title

LANDSCAPE WATER USE

Drawing Number

L2.3