“E”

Water Availability Analysis

CMP Civil Engineering & Land Surveying Inc.
1607 Capell Valley Road
Napa, CA 94558
(707) 266-2559
Cameron@CMPEngineering.com
CMPEngineering.com

Water Availability Analysis Report

for the proposed

Ontrail Vineyards Micro-Winery

3252 Silverado Trail
Napa, CA 94558
APN: 039-610-003

Prepared By:

CMP Civil Engineering & Land Surveying Inc.
1607 Capell Valley Road
Napa, CA 94558
(707) 266-2559

Date: 5/2/2025
Rev1: 10/08/2025

Project # 01171

Table of Contents

Contact Information	
Property Owner:	Ozegna Vineyards, LLC c/o Jim Fassio
Owner Address:	501 El Cerrito Ave Hillsborough, CA 94010
Owner Phone:	650-333-3155

Site Map:

Please refer to the attached Well Location Map. The Well Location Map shows the proposed water source (existing well) and its proximity to other water sources.

Narrative:

This water availability analysis has been prepared to support a use permit application for a proposed winery located on one parcel totaling 13.33 acres at 3252 Silverado Trail in Napa County. The property is currently developed with one three-bedroom residence, one two-bedroom residence, an agricultural barn, a farm office and 8.3 net acres of vineyard. The proposed winery will comply with the Napa County Micro-Winery Ordinance and have a permitted annual wine production of 5,000 gallons, serve up to 10 daily visitors, and will be staffed by a full-time resident employee and a part-time non-resident employee. Water for the existing vineyard is provided by an onsite well (Well #1). Water for the, farm office and residence #1 is provided by a second existing onsite well (Well #2). Water for residence #2 is provided by another onsite existing well (Well #3) located near the said residence #2.

The proposed winery will be served by the existing Well #1 (Project Well). The existing Well #1 will also continue to serve the vineyard. Well #2 & #3 will continue to provide water to the residence #1 & #2.

Tier 1: Water Use Criteria

Existing Water Use:

The site's existing water use has been estimated using information provided by the client, observations made during site visits, and the methodology presented in the current Napa County Water Availability Guidance Document.

Vineyard Water Use: The existing 8.3 acre vineyard under current irrigation practices is estimated to use 0.68 acre-feet of irrigation water per acre per year, resulting in 5.64 acre-feet of water use annually.

Residential Water Use: The existing two residences are estimated to use 0.60 acre-feet of water per year per residence for a total of 1.2 acre-feet per year.

Farm Office Water Use: The existing farm office is estimated to use 0.03 acre-feet per year.

In total, the existing water use for the site is estimated to be 6.87 acre-feet per year, with 1.20 acre-feet per year attributable to residential use, 5.64 acre-feet per year attributable to agricultural use and 0.03 acre-feet per year attributable to farm office use. Refer to Appendix A for detailed calculations of the site's existing water use.

Proposed Water Use:

The project's proposed water use has been estimated using information provided by the client and the methodology presented in the current Napa County Water Availability Guidance Document.

Residential Water Use: There are no changes proposed to the either of the existing residences, and their water use will remain at 0.6 acre-feet per residence per year. Therefore, the project's proposed residential water use will remain unchanged at 1.20 acre-feet per year.

Vineyard Water Use: The existing 8.3 acre vineyard irrigation system is somewhat outdated and the current irrigation scheduling technique has room for improvement specifically if more optimized regulated deficit irrigation (RDI) results are to be achieved. As part of this project, the applicant is proposing to update the irrigation distribution system in order to increase distribution uniformity (DU). The applicant is also proposing to use advanced irrigation scheduling techniques in order to achieve better RDI results. Examples of irrigation efficiency measures to be implemented include installing pressure compensating emitters. Installing an onsite weather station along with soil moisture sensors throughout the vineyard in order to track both evapotranspiration rates and current soil moisture conditions in order to improve irrigation scheduling and avoid over irrigation. Installing accurate water meters on irrigation supply mains in order to improve irrigation volume calculations. Implementing these measures will increase the water use efficiency of the existing vineyard. For comparison, if you took one acre of this existing vineyard and were able to achieve perfect DU and perfect RDI scheduling then one would expect that you would use approximately 0.40 acre feet of water per acre of vineyard (ITRC, Wine Grape Irrigation Management, Dr. Charles Burt, 2012). Thus a perfect water use factor for this property would likely be around 0.40 acre feet per acre. Unfortunately perfect DU and perfect RDI are not achievable. Currently the vineyard is irrigated at a rate of about 0.68 acre feet per acre of vineyard. Given this, the combined DU and RDI efficiency would be 59%. We expect that implementing the above measures will increase this efficiency to 72% which would be the equivalent to achieving both an 85% DU and an 85% RDI efficiency which would be a modest achievement for an existing vineyard such as this. Based on the combined 72% efficiency goal we would expect the water use factor for the existing vineyard to decrease from the said 0.68 acre feet per acre to a modest 0.56 acre feet per acre. Based on this it is expected that these water efficiency measures will decrease the existing vineyard water use down from 5.64 acre-feet per year to 4.65 acre-feet per year.

Process Water Use: In Phase 1 and 2 of this project only secondary fermentation in the barrel or bottle will be taking place onsite. No crush or other production wastewater generating activities will be taking place onsite during these phases, thus no process wastewater will be generated during these phases, thus no process water will be used. In phase 3 production activities will be taking place. At this point the proposed 5,000 gallon-per-year winery is estimated to use 6 gallons of process water per gallon of wine produced, resulting in 0.09 acre-feet per year of process water use. All of the winery process wastewater will be collected in a hold and haul type and hauled to a permitted offsite treatment location. Alternatively the applicant may choose to treat the process waste onsite within a closed treatment system. In this scenario the treated process wastewater will be stored in on-site tanks and beneficially reused for vineyard irrigation, resulting in no net increase in site water use attributable to winemaking activities. That said, due to the possibility of a hold and haul type system being utilized, the possibility of beneficial reuse was ignored for this analysis and thus the expected process water use for the phase 3 portion of this winery is 0.09 acre-feet per year.

Domestic Water Use: The proposed winery's domestic water use includes that of employees and daily visitors. The proposed winery will be staffed by one full-time resident and one part-time employee. The water use of the full-time resident is already accounted for within the existing residential water use, thus only the part-time employee and visitors are considered. With a water-use factor of 8 gallons per day for part-time employees, the annual domestic water use associated with this is 2920 gallons. The existing farm office will be converted into the proposed tasting room which will host up to 10 daily

visitors. With a water use factor of 3 gallons per visitor, the annual domestic water use associated with daily visitation is 10950 gallons. In total, the proposed winery's annual domestic water use is estimated to be 13870 gallons, or 0.04 acre-feet.

Winery Landscape Water Use: The proposed winery's water use calculations include an allowance for supplemental irrigation of up to 1000 square feet of low water use plants with a plant factor of 0.2. Utilizing a reference ET_0 of 49.2 inches annually and assuming an irrigation system with 85% distribution uniformity, the estimated annual water use associated with supplemental winery landscape irrigation is 0.01 acre-feet.

Accounting for all proposed water uses, including residential (1.20 acre-feet), vineyard (4.65 acre-feet), process (0.09 acre-feet), domestic (0.04 acre-feet), and landscape (0.01 acre-feet), the site's total annual proposed water use is estimated to be 5.99 acre-feet per year. Compared to the site's existing total estimated annual water use of 6.87 acre-feet, the proposed winery project results in a net decrease of 0.88 acre-feet of groundwater use per year. As part of the conditions of approval for this Micro Winery, the applicant expects to be required to meter the onsite wells and provide evidence that the actual water use is at or less than the proposed estimated water use. Refer to Appendix A for detailed calculations of the site's proposed water use.

Estimated Recharge:

The current Napa County Water Availability Analysis Guidance Document establishes a groundwater recharge rate of 1.0 acre-feet of water per acre of land on the Napa Valley Floor. Using this criteria, the maximum available groundwater for this parcel is 13.33 acre-feet per year. However, Napa County has recently adopted new interim well permit standards and WAA requirements. Under these new requirements, an interim groundwater recharge rate of 0.3 acre-feet per acre has been established for new groundwater uses within the Napa Valley Sub-basin. Using this new criteria, the maximum available groundwater for new uses on this parcel would be 4.00 acre-feet per year. However, the new groundwater permitting procedures allow for new projects on parcels with existing groundwater use, as long as the proposed project does not result in a net increase in groundwater use from existing sources. Since the subject parcel has an established groundwater use of 6.87 acre-feet per year and the proposed project results in a net decrease in groundwater use of 0.88 acre-feet per year from an established well, the proposed winery complies with the new groundwater permitting procedures with no further analysis warranted.

Tier 2: Well and Spring Interference

Project Well Data:

The project proposes to utilize an existing well (Well #1) currently used to supply water for the vineyard. The well has a casing diameter of 6" with an annular seal depth of 21 feet. The well casing perforations begin at a depth of 138 feet and the casing was completed to a depth of 478 feet in September of 2001. At the time of completion, an air yield test resulted in 240 gallons per minute for 2 hours. Refer to Appendix C for additional project well data.

Neighboring Wells and Springs:

The latest Interim Napa County Well Permit Standards and WAA Requirements require an interference study for any proposed increase in groundwater use occurring from project wells within 500 feet of any off-site well or 1,500 feet from any spring. Due to the proposed decrease in groundwater use for an existing well, a well interference study is not required.

Tier 3: Groundwater/Surface Water Interaction

Surface Water Interaction:

The latest Interim Napa County Well Permit Standards and WAA Requirements require an analysis of potential groundwater to surface water interaction for new, altered, or increased groundwater use occurring from project wells within 1,500 feet of any County-identified Significant Stream inside the Napa River Watershed. The nearest Significant Stream to the project well is an unnamed westerly branch of Milliken Creek, which is approximately 412 feet from the project well. However, a stream interference study is not required if modifications to the location, construction, or operation of the project well are made to reduce any assumed harm relative to current conditions. In the case of this project, there are no proposed modifications to the location, construction or pumping rate of the existing project well. However, the project is proposing a reduction of 0.87 acre-feet per year in overall groundwater use through the revamping of the existing vineyards irrigation system and scheduling methodology. Through these changes in operation, the project will reduce overall well pumping time, and will therefore reduce any assumed harm relative to current conditions. As part of the conditions of approval of this project, well meters will be installed and pumping logs will be maintained in order to verify the proposed water use.

Fire Protection Water Storage:

Based on NFPA 1142 requirements it is expected that the proposed micro-winery will need a minimum of 19,551 gallons of available fire protection water storage. A total of 25,000 gallons of water storage is proposed, which exceeds the NFPA 1142 requirement. Please see the NFPA 1142 calculations in appendix A along with the included site plan for further details.

Summary and Conclusions:

The proposed winery will utilize an existing 240 gallon per minute on-site well capable of supplying groundwater in excess of the proposed demand. When considering all existing and proposed groundwater uses on the subject parcel, the proposed winery project results in a net decrease in parcel groundwater use of 0.88 acre-feet per year. Comparing the proposed total groundwater use of 5.99 acre-feet per year to the existing use of 6.87 acre-feet per year, it is clear that the parcel has adequate water available to serve the proposed use. In conclusion, the subject parcel has adequate groundwater resources available to support the proposed micro winery project.

Appendix A

Water Use Calculations

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Ontrail Vineyard Micro-Winery

Located at:
3252 Silverado Trail
Napa, CA 94558

Date: 5/2/2025
Rev1: 9/15/2025

Project # 01171

Legend
Requires Input
Automatically Calculates
Important Value Automatically Calculates
Important Value Requires Input

WATER AVAILABILITY ANALYSIS - TIER ONE STUDY

WATER USE CALCULATIONS FOR EXISTING USE

RESIDENTIAL	#	FACTOR	AF/YR
PRIMARY RESIDENCES=	2	0.6	1.2
SECONDARY RESIDENCES=	0	0.3	0
FARM LBR DWELLING (# OF PPL) =	0	0.06	0
		SUB TOTAL=	1.2

NON- RESIDENTIAL GUIDELINES

AGRICULTURAL	# ACRE	FACTOR	AF/YR
VINEYARD IRRIGATION ONLY=	8.30	0.68	5.64
VINEYARD HEAT PROTECTION=	0	0.25	0.00
VINEYARD FROST PROTECTION=	0	0.25	0.00
IRRIGATED PASTURE=	0	4	0.00
ORCHARDS=	0	4	0.00
LIVESTOCK (SHEEP/COWS)=	0	0.01	0.00
		SUB TOTAL=	5.644
WINERY	**# GAL**	**FACTOR**	**AF/YR**
PROCESS WATER=	0	See WW Calc	0.00
EMPLOYEES=	0	See WW Calc	0.00
DAILY VISITATION=	0	See WW Calc	0.00
MARKETING EVENTS=	0	See WW Calc	0.00
LANDSCAPING=	0	0.000003069	0.00
		SUB TOTAL=	0.00
INDUSTRIAL	**# EMPL**	**FACTOR**	**AF/YR**
FOOD PROCESSING=	0	31	0
PRINTING/ PUBLISHING=	0	0.6	0
		SUB TOTAL=	0
COMMERCIAL	**# EMPL**	**FACTOR**	**AF/YR**
OFFICE SPACE=	3	0.01	0.03
WAREHOUSE=	0	0.05	0
		SUB TOTAL=	0.03

EXISTING USE TOTALS

RESIDENTIAL=	1.20	AF/YR
AGRICULTURAL=	5.64	AF/YR
WINERY=	0.00	AF/YR
INDUSTRIAL=	0.00	AF/YR
COMMERCIAL=	0.03	AF/YR
OTHER USAGE (LIST BELOW)		
		AF/YR
		AF/YR
		AF/YR
		AF/YR
		AF/YR
TOTAL EXISTING WATER USE=	**2239747**	**G/YR**
TOTAL EXISTING WATER USE=	**6.87**	**AF/YR**

WATER AVAILABILTY CALCULATIONS FOR EXISTING USE			
WELL NUMBER	Q - GPM	AF/YR	
1	240	387.15	
2		0.00	
3		0.00	
4		0.00	
5		0.00	
TOTAL=	240	387.15	
SPRING NUMBER	Q - GPM	AF/YR	
1		0.00	
2		0.00	
3		0.00	
4		0.00	
5		0.00	
TOTAL=	0	0.00	
TANK #	GAL	AF	
1		0.00	
2		0.00	
3		0.00	
4		0.00	
5		0.00	
TOTAL=	0	0.00	
RESERVOIR #	GAL	AF	
1		0	
2		0	
3		0	
4		0	
5		0	
TOTAL=	0	0	
GROUND WATER RECHARGE	AF/YR/ACRE	PARCEL AC	AF/YR
Interim Recharge rate =	0.30	13.33	4.00
Prescribed Recharge rate =	1.00	13.33	13.33
TOTAL AVAILABLE WATER =	**1302989**	**G/YR**	
TOTAL AVAILABLE WATER =	**4.00**	**AF/YR**	
TOTAL EXISTING WATER USE=	**6.87**	**AF/YR**	
REMAINING AVAILABLE WATER =	**-2.88**	**AF/YR**	

WATER USE CALCULATIONS FOR PROPOSED USE			
RESIDENTIAL	**#**	**FACTOR**	**AF/YR**
PRIMARY RESIDENCES=	2	0.6	1.2
SECONDARY RESIDENCES=	0	0.3	0
FARM LBR DWELLING (# OF PPL) =	0	0.06	0
		SUB TOTAL=	1.2
NON- RESIDENTIAL GUIDELINES			
AGRICULTURAL	**# ACRE**	**FACTOR**	**AF/YR**
VINEYARD IRRIGATION ONLY=	8.3	0.56	4.65
VINEYARD HEAT PROTECTION=	0	0.25	0.00
VINEYARD FROST PROTECTION=	0	0.25	0.00
IRRIGATED PASTURE=	0	4	0.00
ORCHARDS=	0	4	0.00
LIVESTOCK (SHEEP/COWS)=	0	0.01	0.00
		SUB TOTAL=	4.65
WINERY	**# GAL**	**FACTOR**	**AF/YR**
PROCESS WATER=	30,000	See WW Calc	0.09
EMPLOYEES=	2920	See WW Calc	0.01
DAILY VISITATION=	10950	See WW Calc	0.03
MARKETING EVENTS=	0	See WW Calc	0.00
LANDSCAPING=	3919	0.000003069	0.01
		SUB TOTAL=	0.14
INDUSTRIAL	**# EMPL**	**FACTOR**	**AF/YR**
FOOD PROCESSING=	0	31	0
PRINTING/ PUBLISHING=	0	0.6	0
		SUB TOTAL=	0
COMMERCIAL	**# EMPL**	**FACTOR**	**AF/YR**
OFFICE SPACE=	0	0.01	0
WAREHOUSE=	0	0.05	0
		SUB TOTAL=	0
PROPOSED USE TOTALS			
RESIDENTIAL=	1.20	AF/YR	
AGRICULTURAL=	4.65	AF/YR	
WINERY=	0.14	AF/YR	
INDUSTRIAL=	0.00	AF/YR	
COMMERCIAL=	0.00	AF/YR	
OTHER USAGE (LIST BELOW)			
RECYCLED PROCESS WATER		AF/YR	
		AF/YR	
		AF/YR	
		AF/YR	
		AF/YR	
TOTAL PROPOSED WATER USE=	**1951715**	**G/YR**	
TOTAL PROPOSED WATER USE=	**5.99**	**AF/YR**	

WATER AVAILABILTY CALCULATIONS FOR PROPOSED USE			
WELL NUMBER	Q - GPM	AF/YR	
1	240	387.12	
2		0.00	
3		0.00	
4		0.00	
5		0.00	
TOTAL=	240	387.12	
SPRING NUMBER	Q - GPM	AF/YR	
1		0.00	
2		0.00	
3		0.00	
4		0.00	
5		0.00	
TOTAL=	0	0.00	
TANK #	GAL	AF	
1	5000	0.02	
2	5000	0.02	
3	5000	0.02	
4	5000	0.02	
5	5000	0.02	
TOTAL=	25000	0.08	
RESERVOIR #	GAL	AF	
1		0	
2		0	
3		0	
4		0	
5		0	
TOTAL=	0	0	
GROUND WATER RECHARGE	AF/YR/ACRE	PARCEL AC	AF/YR
Interim Recharge rate =	0.30	13.33	4.00
Prescribed Recharge rate =	1.00	13.33	13.33
TOTAL WATER AVAILABLE =	**1302989**	**G/YR**	
TOTAL WATER AVAILABLE =	**4.00**	**AF/YR**	
TOTAL PROPOSED WATER USE=	**5.99**	**AF/YR**	
REMAINING AVAILABLE WATER =	**-1.99**	**AF/YR**	

hit ctrl+alt+shift+F9 when finished to recalc all formulas

NFPA 1142 WATER STORAGE CALCS

Building Foot Print	**Length =**	104.5	**Width =**	42	**Sq. Ft. =**	4,389
					Total Sq. Ft. =	4,389
*Add height for each floor	**Ceiling Height =**	18			**Cu. Ft. =**	79,002
*Note: take 1/2 of pitched roof height	**Attic Height =**				**Cu. Ft. =**	-
Additional space: (porch, etc.)	Length		Width		**Cu. Ft. =**	-
				Height	**Total Cu. Ft. =**	79,002
	Total Cu. Ft. =	79,002	**OHC =**	6	**Gallons =**	13,167

Note Occupancy Hazard Classification number is 7 for dwellings, small office complexes and similar constructed facilities. Refer to NFPA 1142 for other types of structures.

Gallons =	13,167	**CCN =**	1.5	**Gallons =**	19,751

Note Type II Construction .75. Ex: Cinderblock, approved non-combustible material.
Type III Construction 1.0. Ex: Brick vaneer, approved non-combustible material etc.
Type V Construction 1.5. **Dwellings max 1.0 CCN per NFPA 1142**

Gallons =	19,751	**Exp =**	1	**Gallons =**	19,750.50

Appendix B

Groundwater Recharge Calculations

CMP Civil Engineering & Land Surveying Inc.
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Ground Water Recharge Analysis

for the proposed

Ontrail Vineyard Micro-Winery

Located at:
3252 Silverado Trail
Napa, CA 94558

Date: 5/2/2025

Project # 01171

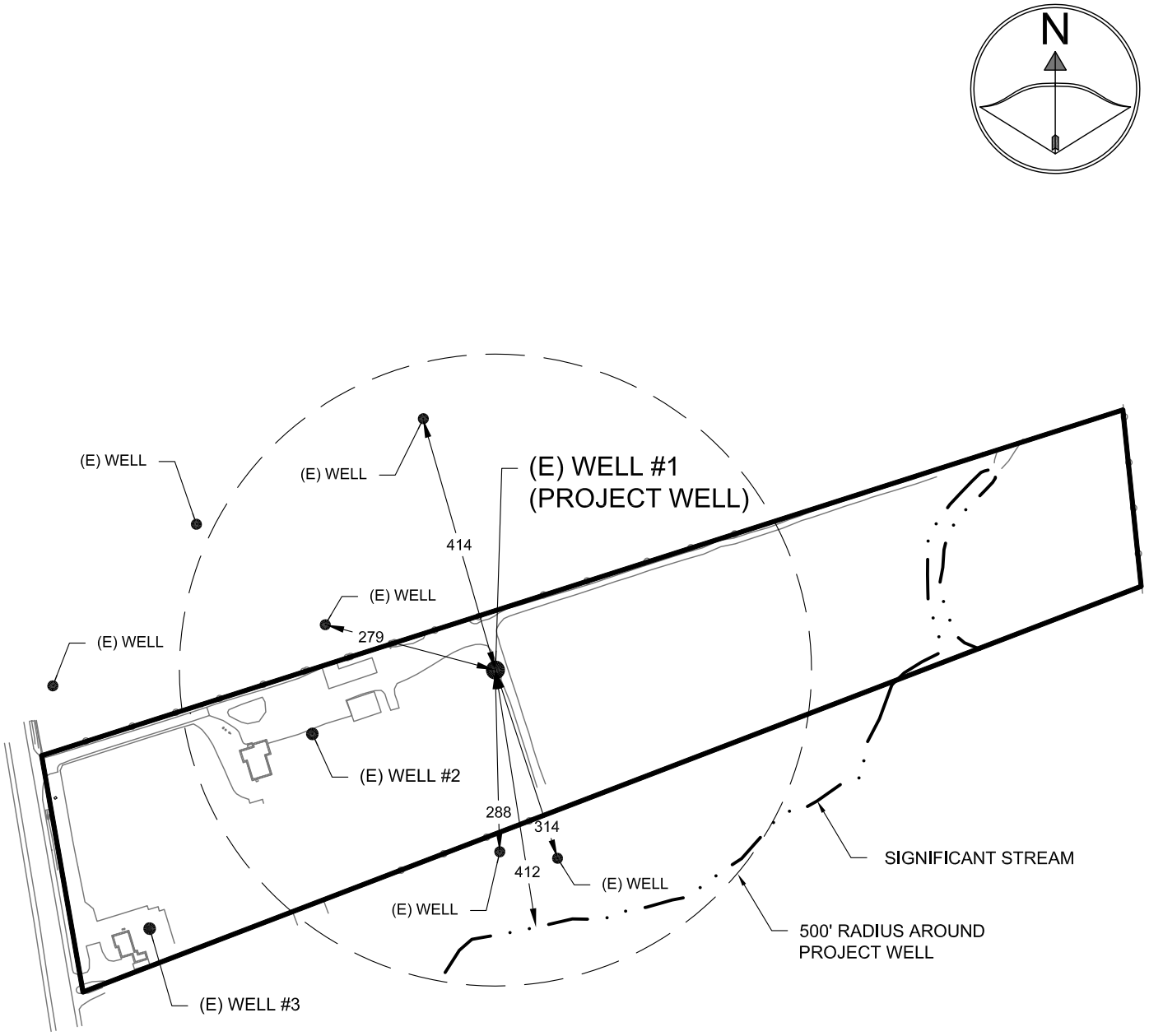
Legend
Requires Input
Automatically Calculates
Important Value Automatically Calculates
Important Value Requires Input

Hit ctrl+alt+shift+F9 when finished.

GROUND WATER RECHARGE CALCULATIONS		
PARCEL VARIABLES		
Parcel size =	13.33	ac
Prescribed Groundwater Recharge Rate =	1.00	acre-ft/acre
Prescribed Annual Groundwater =	**13.33**	**ac-ft/yr**
Parcel size =	13.33	ac
Interim Groundwater Recharge Rate =	0.30	acre-ft/acre
Interim Annual Groundwater =	**4.00**	**ac-ft/yr**

Appendix C

Project Well Data & Well Map



WELL MAP SHEET: 1 OF 1	PROJECT INFO: FASSIO PROPERTY 3252 SILVERADO TRAIL NAPA, CA 94558 APN: 039-610-003	PREPARED BY: CMP CIVIL ENGINEERING & LAND SURVEYING INC. 1607 CAPELL VALLEY ROAD NAPA, CA 94558 (707) 266-2559 P #: 01171 DATE: 5/1/2025	CMP CIVIL ENGINEERING & LAND SURVEYING

QUADRUPLICATE
For Local Requirements

Page 1 of 1

Owner's Well No. _____

Date Work Began 9-12-01, Ended 9-19-01

Local Permit Agency Napa County Environmental Mgmt.

Permit No. 96-11531 Permit Date 6-20-00

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

No. 778374

DWR USE ONLY — DO NOT FILL IN
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION (✓) X VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DRILLING METHOD rotary FLUID bentonite

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
0	35	brown clay
35	45	green clay
45	120	sand & gravel with clay
120	140	green clay
140	185	sands & gravel
185	225	green clay
225	280	sand & gravel
280	300	sandy clay
300	320	course sand
320	360	green clay
360	450	black volcanic sand
450	480	clay

RECEIVED
OCT 31 2001
DEPT. OF
ENVIRONMENTAL MANAGEMENT

338	358	blank	PVC	6	
358	458	screen	PVC	6	.032 slot
458	478	blank	PVC	6	

TOTAL DEPTH OF BORING 480 (Feet)
TOTAL DEPTH OF COMPLETED WELL 478 (Feet)

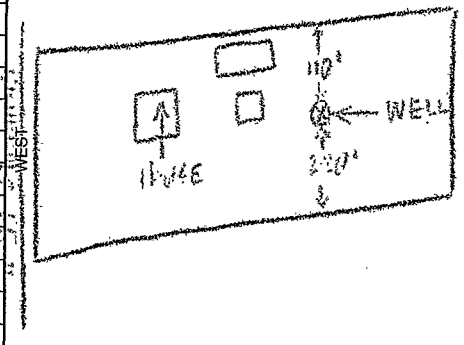
WELL OWNER

Name [redacted]
Mailing Address [redacted]
CITY STATE ZIP

WELL LOCATION

Address same
City
County Napa
APN Book 39 Page 610 Parcel 03
Township Range Section
Latitude DEG. MIN. SEC. NORTH Longitude DEG. MIN. SEC. WEST

LOCATION SKETCH



*Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. **PLEASE BE ACCURATE & COMPLETE.***

ACTIVITY (✓)

X NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)
___ DESTROY *(Describe Procedures and Materials Under "GEOLOGIC LOG")*

PLANNED USES (✓)
WATER SUPPLY
X Domestic ___ Public
___ Irrigation ___ Industrial
___ MONITORING
___ TEST WELL
___ CATHODIC PROTECTION
___ HEAT EXCHANGE
___ DIRECT PUSH
___ INJECTION
___ VAPOR EXTRACTION
___ SPARGING
___ REMEDIATION
___ OTHER (SPECIFY)

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER N/A (Ft.) BELOW SURFACE
DEPTH OF STATIC WATER LEVEL 60 (Ft.) & DATE MEASURED 9-19-01
ESTIMATED YIELD * 240 (GPM) & TEST TYPE air lift
TEST LENGTH 2 (Hrs.) TOTAL DRAWDOWN N/A (Ft.)
** May not be representative of a well's long-term yield.*

CASING (S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0	480	12								
0	138		X				PVC F480	6	SDR-21	
138	198			X			PVC F480	6	SDR-21	.032
198	218		X				PVC F480	6	SDR-21	
218	338			X			PVC F480	6	SDR-21	.032

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE CE-MENT (✓)	BEN-TONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	21	X			concrete
21	23		X		chips
23	478			X	#6 sand

ATTACHMENTS (✓)

___ Geologic Log
___ Well Construction Diagram
___ Geophysical Log(s)
___ Soil/Water Chemical Analyses
___ Other

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME HUCKFELDT WELL DRILLING (PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
ADDRESS 2110 Penny Lane CITY Napa STATE CA ZIP 94559
Signed _____ (WELL DRILLER/AUTHORIZED REPRESENTATIVE)
DATE SIGNED 9-20-01
C-57 LICENSE NUMBER 439-746

DWR 188 REV. 11-97

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Appendix D

Interim Napa County Well Permit Standards and WAA Requirements – January 2024

Interim Napa County Well Permit Standards and WAA Requirements - January 2024

WAA Tier 1: Groundwater Use for Napa County					WAA Tier 2: Well & Spring Interference	WAA Tier 3: Groundwater / Surface Water Interaction	
Napa County new regulatory requirements for the a Tier 1 analysis are pursuant to CEQA, Napa County's Water Availability Analysis (WAA) Guidelines, dated May 12, 2015, Napa County's Drought Emergency, Governor's Executive Order N-7-22/N-3-23, Napa Valley Subbasin Groundwater Sustainability Plan, Napa County Resolution 2022-178, Napa County Code Groundwater Conservation Ordinace - Chapter 13.15, recent court decisions, and pending State-litigation.					Tier 2 analysis is governed by the WAA and the Governor's Executive Order N-7-22/N-3-23. Tier 2 analysis must be performed by licensed professional retained by applicant or through County services and paid for by applicant.	Tier 3 analysis is governed by CEQA, the WAA, and the Public Trust Doctrine, and County Resolution 2022-178. Tier 3 analysis must be performed by licensed professional retained by applicant or through County services and paid for by applicant.	
Well Type	**Groundwater Use**	**Inside Napa Valley Subbasin**	**Inside Napa County Groundwater Deficiant Area (MST)**	**Outside Napa Valley Subbasin & MST**	**Less than 500-feet to neighboring well(s) and/or 1,500-feet to a natural spring(s)**	**Less than 1,500- feet to a Significant Stream Inside the Napa River Watershed**	**Less than 1,500- feet to a Significant Stream Outside the Napa River Watershed**
NEW WELL	Domestic - Individual User	0.3 AF/acre [2,3]	0.6 AF/year	NA [1]	NA [1,7]	Tier 3 Required	NA [1,7]
	Commercial, Industrial, or Agricultural	0.3 AF/acre [3]	No Net Increase and 0.3 AF/acre	Parcel Specific Recharge [4]	Tier 2 Required	Tier 3 Required	Tier 3 Required
	Public Water System	0.3 AF/acre [3]	No Net Increase and 0.3 AF/acre	Parcel Specific Recharge [4]	NA [7]	Tier 3 Required	NA [7]
REPLACEMENT WELL	Domestic - Individual User	0.3 AF/acre [3]	No Net Increase	Parcel Specific Recharge [1]	NA [1,7]	Tier 3 Required [6]	NA [1,7]
	Commercial, Industrial, or Agricultural	0.3 AF/acre [3]	No Net Increase	Parcel Specific Recharge [4]	Tier 2 Required [5]	Tier 3 Required [6]	Tier 3 Required [5]
	Public Water System	0.3 AF/acre [3]	No Net Increase	Parcel Specific Recharge [4]	NA [7]	Tier 3 Required [6]	Tier 3 Required [5]
EXISTING WELL	New, Altered or Increased Water Use for Discretionary Project	0.3 AF/acre [3]	No Net Increase and 0.3 AF/acre	Parcel Specific Recharge [4]	Tier 2 Required [8]	Tier 3 Required [6]	Tier 3 Required [8]

NA = Not Applicable

[1] Assumes less than 2-acre-feet per year of groundwater for individual domestic users.

[2] Requirement can be met by submitting a "Water Use Declaration" that reflects the allowed water usage.

[3] Where existing groundwater use exceeds the 0.3 ac-ft/ac, No Net Increase in Groundwater use is required (Subject to change by the GSA), and shall be demonstrated through a water demand analysis.

[4] Where existing groundwater use exceeds the Parcel Specific Recharge, No Net Increase or reduction in Groundwater use is required, and shall be demonstrated through a water demand analysis.

[5] The analysis is not required when the replacement well is located further away from the neighboring well, natural spring, or Significant Stream and there is no increase in groundwater use.

[6] The analysis is not required if modifcations 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.

[7] Unless associated with a Discretionary Project; and every effort should be made to locate the well as far as possible from neighboring wells and springs.

[8] The anlaysis is only required for an increase in groundwater use.