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Water Availability Analysis Report

Bonny's Vineyard P22-00002
Planning Commission Hearing Date
December 18, 2024



CMP Civil Engineering & Land Surveying Inc.
1607 Capell Valley Road
Napa, CA 94558
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Water Availability Analysis Report

for the proposed winery named

Bonny's Vineyard

1555 Skellenger Lane
Napa, CA 94558
APN: 032-200-080

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

Date: 12/13/2021
Rev 1: 8/15/2022
Rev 2: 7/26/2023
Rev 3: 10/11/2023
Rev 4: 4/17/2024
Rev 5: 8/8/2024

Project # 00212



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Contact Information

Property Owner:	Meyer Family Enterprises
Owner Address:	794 Oakville Cross Road Napa, CA 94558
Owner Phone:	(707) 603-6003

Site Map:

Please refer to the attached Well Location Map for Bonny’s Vineyard. 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 25.41 acres at 1555 Skellenger Lane on the valley floor in Napa County. The property is currently developed with one main residence and one secondary residence, along with 17.06 acres of existing mature vineyard. The proposed winery will have a permitted annual wine production of 30,000 gallons, employ six full-time employees, and serve up to 45 daily visitors. The proposed winery will also host two 150-person and nine 80-person events annually.

There are three existing wells on the subject parcel. The project well (Well #1) currently serves the existing vineyard irrigation and is proposed to serve the winery. The second well (Well #2) is approximately 215 feet away from Well #1 and serves the secondary residence. The third well (Well #3) is approximately 1650 feet away from Well #1 and serves the primary residence as well as irrigation for some of the vineyard located near the primary residence.

Tier 1: Water Use Criteria

Existing Water Use:

Actual water use data is not available for the site, therefore 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 Use: The 17.06 acre vineyard is estimated to use 0.30 acre-feet of irrigation water per acre per year and 0.25 acre-feet of heat protection water per acre per year, resulting in 9.38 acre-feet of annual vineyard water use.

Residential Use: The existing primary residence is estimated to use 0.60 acre-feet of water per year and the existing secondary residence is estimated to use 0.20 acre-feet of water per year.

In total, the existing water use for the site is estimated to be 10.18 acre-feet per year, with 0.80 acre-feet per year attributable to residential use and 9.38 acre-feet per year attributable to agricultural 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 proposed changes to either the primary or secondary residence, and therefore the project's proposed residential water use remains unchanged from existing, at 0.80 acre-feet per year.

Vineyard Water Use: Approximately 0.63 acres of existing vineyard will be removed to facilitate the construction of the proposed winery building, resulting in 16.43 acres of remaining vineyard. The annual vineyard water use factors of 0.30 acre-feet per acre for irrigation and 0.25 acre-feet per acre for heat protection remain unchanged from existing, resulting in a proposed annual water use of 9.04 acre-feet for the vineyard.

Process Water Use: The proposed 30,000 gallon-per-year winery is estimated to use 5 gallons of process water per gallon of wine produced, resulting in 0.46 acre-feet per year of process water use. All of the winery process wastewater will be collected and treated within a closed on-site treatment system. The treated process wastewater will be stored in on-site tanks and beneficially reused for vineyard irrigation and heat protection, resulting in no net increase in site water use attributable to winemaking activities.

Domestic Water Use: The proposed winery's domestic water use includes that of employees, daily visitors and event attendees. The proposed winery's staffing plan includes up to six full-time employees during the week (Monday – Friday) and on crush-season weekends, and four full-time employees during non-crush weekends. The proposed winery staffing plan results in a total of 2,002 employee-days annually. With a water-use factor of 15 gallons per employee-day, the annual domestic water use associated with employees is 30,030 gallons. The proposed winery's daily visitation request includes a maximum of 45 visitors per day during the crush season and on weekends, and 25 visitors per day on weekdays (Monday – Friday) during the non-crush season. The visitation request results in a maximum total of 11,605 daily visitors per year. With a water use factor of 3 gallons per visitor, the annual domestic water use associated with daily visitation is 34,815 gallons. The proposed winery's annual marketing event schedule includes two catered large events with up to 150 attendees and nine catered medium events with up to 80 attendees, resulting in a total of 1,020 annual event attendees. Portable restroom facilities will be utilized for all events. Utilizing a water use factor of 5 gallons per attendee, the annual domestic water use associated with marketing events is 5,100 gallons. In total, the proposed winery's annual domestic water use is estimated to be 69,945 gallons, or 0.21 acre-feet.

Winery Landscape Water Use: The proposed winery's water use calculations include an allowance for supplemental irrigation of up to 2,500 square feet of moderate water use plants with a plant factor of 0.5 and up to 2,500 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 0.11 acre-feet.

Accounting for all proposed water uses, including residential (0.80 acre-feet), vineyard (9.04 acre-feet), process (0.46 acre-feet), domestic (0.21 acre-feet), and landscape (0.11 acre-feet), and including the beneficial reuse of treated process wastewater (-0.46 acre-feet), the site's total annual proposed water use is estimated to be 10.16 acre-feet. Compared to the site's existing total estimated annual water use of 10.18 acre-feet, the proposed winery project results in a net reduction of 0.02 acre-feet of groundwater use per year. Refer to Appendix A for detailed calculations of the site's proposed water use.

Water Availability:

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 25.41 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 Subbasin. Using this new criteria, the maximum available groundwater for new uses on this parcel would be 7.62 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 10.18 acre-feet per year and the proposed project results in a net decrease in groundwater use of 0.02 acre-feet per year from an established well, the proposed winery complies with the new groundwater permitting procedures with no further analysis warranted. The winery well has a yield of 160 gallons per minute, which equates to 258 acre-feet per year.

Tier 2: Well and Spring Interference

Project Well Data:

The project proposes to utilize an existing well (Well #1) currently used to supply irrigation for the vineyard. The well has a casing diameter of 8" with an annular seal depth of 53 feet. The well was completed to a depth of 640 feet in August 2011. At the time of completion, an air yield test resulted in an estimated 500 gallons per minute for four hours. A pumping yield test performed in March 2019 resulted in a stable yield of 160 gallons per minute for 1.5 hours. Refer to Appendix B for additional project well data.

Neighboring Wells and Springs:

The latest Interim Napa County Well Permit Standards and WAA Requirements require an interference analysis 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 off-site spring. There is one off-site well located approximately 287 feet from the project well and no known springs within 1,500 feet of the project well. However, an interference analysis to the off-site well is not warranted for this project because the project is not proposing any increase in groundwater use compared to the site's existing groundwater use. The Tier 2 criteria is met with no further analysis required.

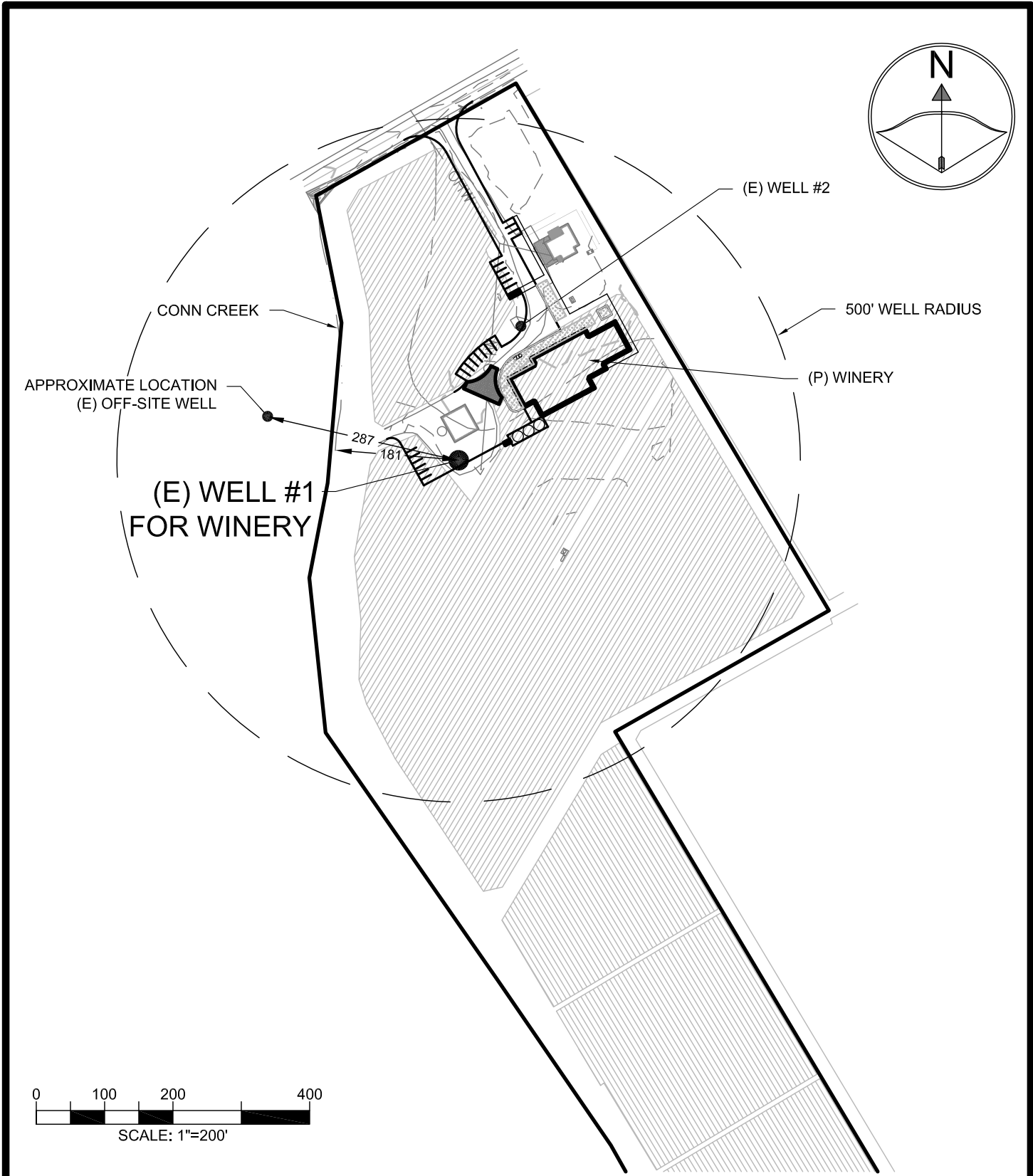
Tier 3: Groundwater/Surface Water Interaction

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 Conn Creek, which is approximately 181 feet from the well. However, a stream interference analysis 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 in overall groundwater use through the removal of 0.63 acres of existing vineyard and the recycling of winery process wastewater for supplemental vineyard irrigation. Through these changes in operation, the project will reduce overall well pumping time, and will therefore reduce any assumed harm relative to current conditions.

Summary and Conclusions:

When considering all existing and proposed groundwater uses on the subject parcel, the proposed winery project results in a net decrease in groundwater use of 0.02 acre-feet per year. The proposed winery will utilize an existing on-site 160 gallon per minute well capable of supplying water in excess of the proposed demand, and therefore passes the Tier 1 screening criteria. Since there is a proposed net decrease in groundwater use from the existing project well, the project passes the Tier 2 and Tier 3 criteria without further analysis required. In conclusion, the subject parcel has adequate, sustainable groundwater resources available to support the proposed winery project, while reducing any assumed existing harm to Conn Creek from the existing project well.



WELL LOCATION MAP

SHEET: 1 OF 1

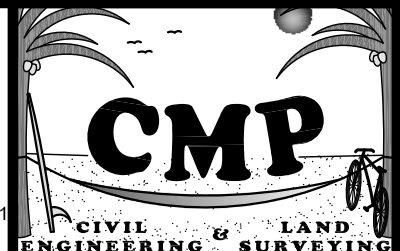
PROJECT INFO:

BONNY'S VINEYARD
 1555 SKELLENGER LANE
 NAPA, CA
 APN: 030-200-080

PREPARED BY:

CMP CIVIL ENGINEERING &
 LAND SURVEYING INC.
 1607 CAPELL VALLEY ROAD
 NAPA, CA 94558
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DATE: 12/13/2021
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Appendix A

Supporting Calculations



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Project-Specific Water Use Factors

Appendix B of the WAA Guidance Document provides guidelines and use factors for estimating site water use. These guidelines provide a good starting point for developing a project-specific water use estimate and are typically utilized in the calculations supporting this analysis. However, each project has unique characteristics which occasionally necessitate the use of factors not provided in Appendix B of the WAA Guidance Document. This project-specific analysis utilizes two use factors which do not appear in the WAA Guidance Document, and they are described in detail below:

Winery Process Water Use: While no external water is introduced directly to the wine fermentation process, considerable water use does occur within a winery. Process water is used extensively throughout the winery, including in the washing of grapes, cleaning of hoses, tanks, pumps, equipment, and building floors, and the preparation and washing of barrels, along with various other activities such as bottling. Winery process water use is generally expressed as a ratio of water used to wine produced. There are no standards which provide definitive water use guidelines for a given winery. The 2019 Administrative Draft of the Statewide General Waste Discharge Requirements for Winery Process Water Treatment Systems estimated that winery process water is used at a ratio of 5:1. The March 2024 Napa County Water Conservation Workplan suggests that a typical winery uses process water at a ratio of 6:1. The 2015 Napa County WAA Guidance Document provides a guideline ratio of 7:1. Data obtained within the winemaking industry suggests that winery process water use ratios range from 1.5:1 to 12:1, with a range of 3:1 to 6:1 typical of modern water-efficient facilities of the size and scope proposed in this Use Permit application. As such, this analysis assumes a process water ratio of 5:1 as a reasonable estimate specific to this project.

Marketing Event Water Use: The WAA Guidance Document does not provide an estimated water use factor for marketing events utilizing off-site catering and portable restroom facilities, such as the events proposed in this Use Permit application. The utilization of off-site catering means that all food preparation and dish washing activities will occur off-site, resulting in no on-site water use attributable to those activities. The utilization of portable restroom facilities presumably results in no on-site water use attributable to the restrooms, however some portable facilities require a site-supplied water connection to provide sink and toilet flush functionality. Additionally, it is reasonable to assume that the preparation and cleanup of the event space might result in some incidental water use. As such, this analysis applies a use factor of five gallons per event attendee as a reasonable estimate to account for the potential water use associated with marketing events.



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Water Availability Analysis Calculations
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Located at:

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Project # 00212

Legend

Requires Input

Automatically Calculates

Important Value Automatically Calculates

Important Value Requires Input

Hit ctrl+alt+shift+F9 when finished to recalc al

WATER AVAILABILITY ANALYSIS- PHASE ONE STUDY			
WATER USE CALCULATIONS FOR EXISTING USE			
RESIDENTIAL	#	FACTOR	AF/YR
PRIMARY RESIDENCES=	1	0.6	0.6
SECONDARY RESIDENCES=	1	0.2	0.2
FARM LBR DWELLING (# OF PPL) =	0	0.06	0
		SUB TOTAL=	0.8
NON- RESIDENTIAL GUIDELINES			
AGRICULTURAL	# ACRE	FACTOR	AF/YR
VINEYARD IRRIGATION ONLY=	17.06	0.3	5.12
VINEYARD HEAT PROTECTION=	17.06	0.25	4.27
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=	9.383
WINERY	# GAL	FACTOR	AF/YR
PROCESS WATER=	0	See WW Calc	0.00
DOMESTIC & LANDSCAPING	0	0.000003069	0.00
OTHER=	0	0.000003069	0.00
OTHER2=	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=	0	0.01	0
WAREHOUSE=	0	0.05	0
		SUB TOTAL=	0
EXISTING USE TOTALS			
RESIDENTIAL=	0.80	AF/YR	
AGRICULTURAL=	9.38	AF/YR	
WINERY=	0.00	AF/YR	
INDUSTRIAL=	0.00	AF/YR	
COMMERCIAL=	0.00	AF/YR	
OTHER USAGE (LIST BELOW)			
		AF/YR	
		AF/YR	
		AF/YR	
		AF/YR	
		AF/YR	
TOTAL EXISTING WATER USE=	3317915	G/YR	
TOTAL EXISTING WATER USE=	10.18	AF/YR	

WATER AVAILABILITY CALCULATIONS FOR EXISTING USE

WELL NUMBER	Q - GPM	AF/YR	
1	160	258.081	
2	200	2413.231	
3 (Unknown Yield)	0	0.000	
4	0	0.000	
5	0	0.000	
TOTAL=	360	2671.313	
SPRING NUMBER	Q - GPM	AF/YR	
1	0	0.000	
2	0	0.000	
3	0	0.000	
4	0	0.000	
5	0	0.000	
TOTAL=	0	0.000	
TANK #	GAL	AF	
1	10000	0.031	
2	0	0.000	
3	0	0.000	
4	0	0.000	
5	0	0.000	
TOTAL=	10000	0.031	
RESERVOIR #	GAL	AF	
1	0.000	0	
2	0.000	0	
3	0.000	0	
4	0.000	0	
5	0.000	0	
TOTAL=	0.000	0	
GROUND WATER RECHARGE	AF/YR/ACRE	PARCEL AC	AF/YR
Recharge rate (Napa County WAA) =	1.00	25.41	25.41
Recharge rate (Napa County interim drought emergency policy) =	0.30	25.41	7.62
TOTAL INTERIM AVAILABLE WATER =	2483793	G/YR	
TOTAL INTERIM AVAILABLE WATER =	7.62	AF/YR	
TOTAL EXISTING WATER USE=	10.18	AF/YR	
INTERIM REMAINING AVAILABLE WATER =	0.00	AF/YR	

WATER USE CALCULATIONS FOR PROPOSED USE

RESIDENTIAL			
	#	FACTOR	AF/YR
PRIMARY RESIDENCES=	1	0.6	0.6
SECONDARY RESIDENCES=	1	0.2	0.2
FARM LBR DWELLING (# OF PPL) =	0	0.06	0
		SUB TOTAL=	0.8
NON- RESIDENTIAL GUIDELINES			
AGRICULTURAL			
	# ACRE	FACTOR	AF/YR
VINEYARD IRRIGATION ONLY=	16.43	0.3	4.93
VINEYARD HEAT PROTECTION=	16.43	0.25	4.11
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=	9.0365
WINERY			
	# GAL	FACTOR	AF/YR
PROCESS WATER=	150000	0.000003069	0.46
DOMESTIC, EMPLOYEE & VISITATION= (SEE WW CALCS FOR ADD'L DETAIL)	69945	0.000003069	0.21
LANDSCAPING=	36564	0.000003069	0.11
OTHER2=	0	0.000003069	0.00
		SUB TOTAL=	0.79
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=	0.80	AF/YR	
AGRICULTURAL=	9.04	AF/YR	
WINERY=	0.79	AF/YR	
INDUSTRIAL=	0.00	AF/YR	
COMMERCIAL=	0.00	AF/YR	
OTHER USAGE (LIST BELOW)			
RECYCLED PROCESS WATER	-0.46	AF/YR	
		AF/YR	
		AF/YR	
		AF/YR	
		AF/YR	
TOTAL PROPOSED WATER USE=	3311524	G/YR	
TOTAL PROPOSED WATER USE=	10.16	AF/YR	

WATER AVAILABILTY CALCULATIONS FOR PROPOSED USE			
WELL NUMBER	Q - GPM	AF/YR	
1	160	258.081	
2	200	322.6014	
3 (Unknown Yield)	0	0	
4	0	0	
5	0	0	
TOTAL=	360	580.683	
SPRING NUMBER	Q - GPM	AF/YR	
1	0	0	
2	0	0	
3	0	0	
4	0	0	
5	0	0	
TOTAL=	0	0	
TANK #	GAL	AF	
1	10000	0.031	
2	10000	0.031	
3	10000	0.031	
4	0	0.000	
5	0	0.000	
TOTAL=	30000	0.092	
RESERVOIR #	GAL	AF	
1	0	0	
2	0	0	
3	0	0	
4	0	0	
5	0	0	
TOTAL=	0	0	
GROUND WATER RECHARGE	AF/YR/ACRE	PARCEL AC	AF/YR
Recharge rate (Napa County WAA) =	1.00	25.41	25.41
Recharge rate (Napa County interim drought emergency policy) =	0.30	25.41	7.62
TOTAL EXISTING WATER AVAILABLE =	3317915	G/YR	
TOTAL EXISTING WATER AVAILABLE =	10.18	AF/YR	
TOTAL PROPOSED WATER USE=	10.16	AF/YR	
INTERIM REMAINING AVAILABLE WATER =	0.02	AF/YR	



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Proposed Winery Wastewater Flow Calculations

for the proposed winery named

Bonny's Vineyard

Located at:

1555 Skellenger Lane

Napa, CA 94558

Date: 12/13/2021

Project # 00212

Legend

Requires Input
Automatically Calculates
Important Value Automatically Calculate
Important Value Requires Input

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

Winery Waste Flow Summary

These wastewater calculations are for a proposed winery. The calculations are to establish the expected peak process and domestic daily flows. They are also to estimate the expected annual domestic and process water use.

Winery Proposed Peak Process Wastewater Flows

Wine Production =	30000	gal/wine/yr
Crush Duration =	30.00	days (30 -60)
Peak Process Waste Flows During Crush =	1500.00	gal/day ((1.5 x production)/crush days)
Average Process Flows (non crush) =	410.96	gal/day ((5 x production)/days in yr)
Additional Process Flow =	0.00	gal/day (usually 0)
Winery Peak Process Waste Flows =	1500.00	gal/day

Proposed Domestic Peak Wastewater Flows

Peak Crush Weekend

Number of FT Employees =	6	#
Number of PT Employees =	0	#
Number of daily visitors =	45	#
Event people count serviced by this system =	0	# (no visitors on event days)
FT employee daily domestic waste flow =	90.00	gal/day (15 g/p)
PT employee daily domestic waste flow =	0.00	gal/day (8 g/p)
Visitor daily domestic waste flow =	135.00	gal/day (3 g/p)
Event daily domestic waste flow =	0.00	gal/day (5 g/p)
Peak Winery Domestic Flow =	225.00	gal/day

Peak Non Crush Weekend

Number of FT Employees =	4	#
Number of PT Employees =	0	#
Number of daily visitors =	45	#
Event people count serviced by this system =	0	# (no visitors on event days)
FT employee daily domestic waste flow =	60.00	gal/day (15 g/p)
PT employee daily domestic waste flow =	0.00	gal/day (8 g/p)
Visitor daily domestic waste flow =	135.00	gal/day (3 g/p)
Event daily domestic waste flow =	0.00	gal/day (5 g/p)
Peak Winery Domestic Flow =	195.00	gal/day

Peak Weekday

Number of FT Employees =	6	#
Number of PT Employees =	0	#
Number of daily visitors =	25	#
Event people count serviced by this system =	0	# (no visitors on event days)
FT employee daily domestic waste flow =	90.00	gal/day (15 g/p)
PT employee daily domestic waste flow =	0.00	gal/day (8 g/p)
Visitor daily domestic waste flow =	75.00	gal/day (3 g/p)
Event daily domestic waste flow =	0.00	gal/day (5 g/p)
Peak Winery Domestic Flow =	165.00	gal/day

Winery Peak Domestic Wasteflows =	225.00	gal/day
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Combined Winery Waste Annual Volume Calculations

Winery Combined Process & Domestic Waste Flows

Typical Crush Weekend Volumes

Number of FT Employees =	6	#
Number of PT Employees =	0	#
Number of daily visitors =	45	#
FT employee daily domestic waste flow =	90.00	gal/day (15 g/p)
PT employee daily domestic waste flow =	0.00	gal/day (8 g/p)
Visitor daily domestic waste flow =	135.00	gal/day (3 g/p)
Number of Flow Days =	30.00	gal/day
Total domestic wastewater volume =	6750	gal/year
Total process wastewater volume =	12329	gal/year
Combined Process and Domestic Volume =	19079	gal/year

Typical Non Crush Weekend Volumes

Number of FT Employees =	4	#
Number of PT Employees =	0	#
Number of daily visitors =	45	#
FT employee daily domestic waste flow =	60.00	gal/day (15 g/p)
PT employee daily domestic waste flow =	0.00	gal/day (8 g/p)
Visitor daily domestic waste flow =	135.00	gal/day (3 g/p)
Number of Flow Days =	94.00	gal/day
Total domestic wastewater volume =	18330	gal/year
Total process wastewater volume =	38630	gal/year
Combined Process and Domestic Volume =	56960	gal/year

Typical Weekday Volumes

Number of FT Employees =	6	#
Number of PT Employees =	0	#
Number of daily visitors =	25	#
FT employee daily domestic waste flow =	90.00	gal/day (15 g/p)
PT employee daily domestic waste flow =	0.00	gal/day (8 g/p)
Visitor daily domestic waste flow =	75.00	gal/day (3 g/p)
Number of Flow Days =	241.00	gal/day
Total domestic wastewater volume =	39765	gal/year
Total process wastewater volume =	99041	gal/year
Combined Process and Domestic Volume =	138806	gal/year

Special Event Visitor Volumes

	visitors	days/yr	flow/day	gallons
Large Events =	150	2	5	1500
Medium Events =	80	9	5	3600
Small =	0	0	5	0
Very Small =	0	0	5	0
Total Annual Event Visitor Waste Volume =	5100	gal/year		

Total annual domestic wastewater volume =	69945	gal/yr	0.21	af
Total annual process wastewater volume =	150000	gal/yr	0.46	af
Total Winery Wastewater Annual Vol =	219945	gal/yr	0.68	af

Appendix B

Project Well Data

STATE OF CALIFORNIA
WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. **e0133550**

DWR USE ONLY -- DO NOT FILL IN

STATE WELL NO./STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

Owner's Well No. 1-2011

Date Work Began 7/8/2011, Ended 8/3/2011

Local Permit Agency Napa County Environmental Mgmt

Permit No. E11-00266 Permit Date 7/1/2011

WELL OWNER

Name
Mailing Address CA
City STATE ZIP

WELL LOCATION

Address 1555 Skellenger Lane
City Oakville CA
County Napa
APN Book 030 Page 200 Parcel 047 60
Township Range Section

Latitude DEG. MIN. SEC.

GEOLOGIC LOG

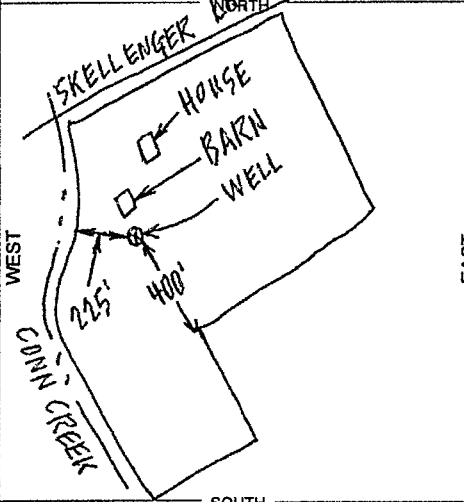
ORIENTATION (✓) VERTICAL HORIZONTAL ANGLE (SPECIFY)

DRILLING METHOD ROTARY FLUID BENTONITE

DEPTH FROM SURFACE		DESCRIPTION
Ft.	to Ft.	
0	5	BROWN CLAY
5	10	SAND & GRAVEL
10	14	BROWN CLAY
14	38	SAND & GRAVEL
38	57	BROWN CLAY
57	80	SAND & GRAVEL
80	86	BROWN CLAY
86	142	SAND & GRAVEL
142	160	BROWN CLAY
160	170	SAND & GRAVEL
170	210	GREEN SANDS & GRAVEL
210	221	GREEN SANDY CLAY
221	294	GREEN SAND / 20% GREEN CLAY
294	298	MIXED VOLCANIC SANDS
298	340	GRAY SANDY CLAY
340	430	GREEN SANDY CLAY
430	450	BROWN CLAY
450	490	GREEN SANDY CLAY
490	520	50% BLACK VOLCANICS / 50% GREEN ASH
520	560	80% BLACK VOLCANICS / 20% GREEN ASH
560	570	50% BLACK VOLCANICS / 50% GREEN ASH
570	590	HARD FRACTURED MIXED VOLCANICS
590	640	FRACTURED MIXED VOLCANICS

RECEIVED
SEP 29 2011
DEPT. OF ENVIRONMENTAL MANAGEMENT

LOCATION SKETCH



ACTIVITY (✓)

- NEW WELL
- MODIFICATION/REPAIR
 Deepen
 Other (Specify)
- DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")
- PLANNED USES (✓)
WATER SUPPLY
 Domestic Public
 Irrigation Industrial
- MONITORING
TEST WELL
CATHODIC PROTECTION
HEAT EXCHANGE
DIRECT PUSH
INJECTION
VAPOR EXTRACTION
SPARGING
REMEDICATION
OTHER (SPECIFY)

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.

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER N/A (FL) BELOW SURFACE 1

DEPTH OF STATIC WATER LEVEL 17 (FL) & DATE MEASURED 8/3/2011

ESTIMATED YIELD 500 (GPM) & TEST TYPE AIR LIFT

TEST LENGTH 4 (Hrs.) TOTAL DRAWDOWN N/A (FL)

May not be representative of a well's long-term yield.

CONTINUED CASING LAYOUT

DEPTH FROM SURFACE	DEPTH TO	DESCRIPTION
390	420	SCREEN PVC 8" .032 SLOT
420	470	BLANK PVC 8"
470	630	SCREEN PVC 8" .032 SLOT
630	640	BLANK PVC 8"

TOTAL DEPTH OF BORING 650 (Feet)
TOTAL DEPTH OF COMPLETED WELL 640 (Feet)

DEPTH FROM SURFACE	BORE-HOLE DIA. (Inches)	CASING (S)					
		TYPE (✓)	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)	
0	650	15					
0	60	✓	PVC F480	8	SDR-21		
60	120	✓	PVC F480	8	SDR-21	.032	
120	160	✓	PVC F480	8	SDR-21	.032	
160	340	✓	PVC F480	8	SDR-21	.032	
340	390	✓	PVC F480	8	SDR-21		

DEPTH FROM SURFACE	ANNULAR MATERIAL			
	CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	53	✓		10 SK / SAND
53	640		✓	#6 SAND

- ATTACHMENTS (✓)**
- Geologic Log
 - Well Construction Diagram
 - Geophysical Log(s)
 - Soil/Water Chemical Analysis
 - 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, INC.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

2110 Penny Lane Napa CA 94559
ADDRESS CITY STATE ZIP

Signed [Signature] DATE SIGNED 08/06/11 WELL DRILLER/AUTHORIZED REPRESENTATIVE 439-746 C-57 LICENSE NUMBER



5365 BROADWAY STREET
 AMERICAN CANYON, CA 94503-9678
 Contractor's License #258826

Napa (707) 226-9698 Vallejo (707) 642-9698

FAX (707) 226-1648

Report of Water Well Test

To: Meyer Family Enterprises
 P.O. Box 49
 Oakville, Ca 94562

Site: Spitfire
 1555 Skellenger Ln
 Rutherford, Ca 94573

Date/Time	Gallons per minute	Pumping Level	Psi	Water Clarity
03-08-19 8:00 am	280	14		
8:05	280	24	60	
8:08	350	31		
8:10	180	24		
8:15	160	24	60	
8:20	160	23	60	
8:30	160	23	60	
8:45	160	23	60	
9:00	160	23	60	
9:15	160	23	60	
9:20	160	23	60	
9:21	Off	20 Recovery		
9:22		19		
9:30		16		
<p>These are the results of a 1-1/2hr test including recovery with existing equipment. Gallons per minute produced at time of final test: 160 Results of above reported test not warranted beyond this date.</p>				

All Major Brands Available

Appendix C

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 Ordinance - 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 Deficient 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 <u>Inside</u> the Napa River Watershed	Less than 1,500- feet to a Significant Stream <u>Outside</u> 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 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.

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 analysis is only required for an increase in groundwater use.