

“M”

Preliminary Water System Technical Report

Bonny's Vineyard Appeal P25-00020-APL

Board of Supervisors Hearing – May 6, 2025



CMP Civil Engineering & Land Surveying Inc.
1607 Capell Valley Road
Napa, CA 94558
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Preliminary Water System Technical
Report pertaining to Section 116527 of
the Health and Safety Code
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: 12/15/2021

Project # 00212



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Proposed Water System General Descriptions

The proposed water system, officially called the Bonny's Vineyard Water System, will supply potable water solely to the existing subject Winery. The water source will be an existing onsite well and the water storage facilities will be the proposed three 10,000 gallon water tanks to be located on the property.

Type of Water System and Reason it is required

The type of public water system proposed is a Transient Non-Community water system. The proposed public water system is required because the proposed winery visitation is expected to be above 25 people per day for more than 60 days per year.

Required Technical Sections per 116527 of the Health and Safety Code

1. List of Public Water Systems within 3 mile of Project along public right of ways.
 - 1.1. None, City of Napa the closest but well over 3 miles away.
2. Feasibility of connecting to above listed public water systems
 - 2.1. Connecting to the agency listed in 1.1 is not feasible because there is no public water system within 3 miles of project.
3. Actions taken to secure water from a public water system
 - 3.1. None, no water system available within 3 miles.
4. Source(s) of domestic water for new public water system
 - 4.1. The existing Well is a 160 gallons per minute well located on the northerwestern portion of the subject property. Please see the well location map included in Attachment "B" and the well yield test in Attachment "C".
5. Construction and operation costs of water system
 - 5.1. The water system costs is expected to cost \$80,000. It is expected that the system will have a usable lifespan of 30 years. It is expected to cost \$1000 annually to operate, maintain and properly sample and test the water. It is expected that the system will cost roughly \$134,000 to replace 30 years from now. To have this money available 30 years from now, \$4467 must be set aside in a 0% annual interest rate account for the next 30 years. Thus it will cost an estimated \$5467 per year to own, operate, maintain and eventually replace the subject water system. The subject applicant has more than adequate funds to meet the financial demands of this water system.
6. Cost comparison, connecting to existing public system vs. create new
 - 6.1. A cost comparison is not applicable because there is no other public water systems within 3 miles.
7. Actions taken to secure managerial and operational oversight

- 7.1. Not applicable because we are more than 3 miles outside of the sphere of influence of public water systems.
8. Twenty year water use analysis
 - 8.1. It is expected that this system will use a maximum of 0.71 acre feet of water per year for the next 20 years which comes to maximum of 14.2 acre feet of water required over the entire 20 years. To verify the proposed water system can provide this it must be compared to two different scenarios, the available flow of the well listed in 1.1 and the ground water recharge rate for the property(s) the well serves.
 - 8.2. First, the source well listed in 1.1 is rated at 160 gallons per minute which equates to 258 acre feet per year, which then equates to a 20 year total available water of 5160 acre feet. Comparing this to the above required 20 year total of 14.2 acre feet it can be seen that the well itself can provide more than enough water.
 - 8.3. Secondly the worst case scenario ground water recharge rate for the subject property is 25.41 acre feet per year, please see the water availability calculations located in Attachment "D" for further details. The above recharge rate equates to a 20 year total available water of 508.2 acre feet. Comparing this to the above required 20 year total of 14.2 acre feet it can be seen that the ground water recharge rate will provide more than enough water.
 - 8.4. The conclusion of this section is that the water supply to the proposed system is more than enough for the proposed use.
9. Local Agency Formation Commission (LAFCO) documentation
 - 9.1. Not applicable because closest public water system was more than 3 miles away.

Overall Conclusions

The only viable option for the subject Winery is to develop its own Transient Non-Community Water System.

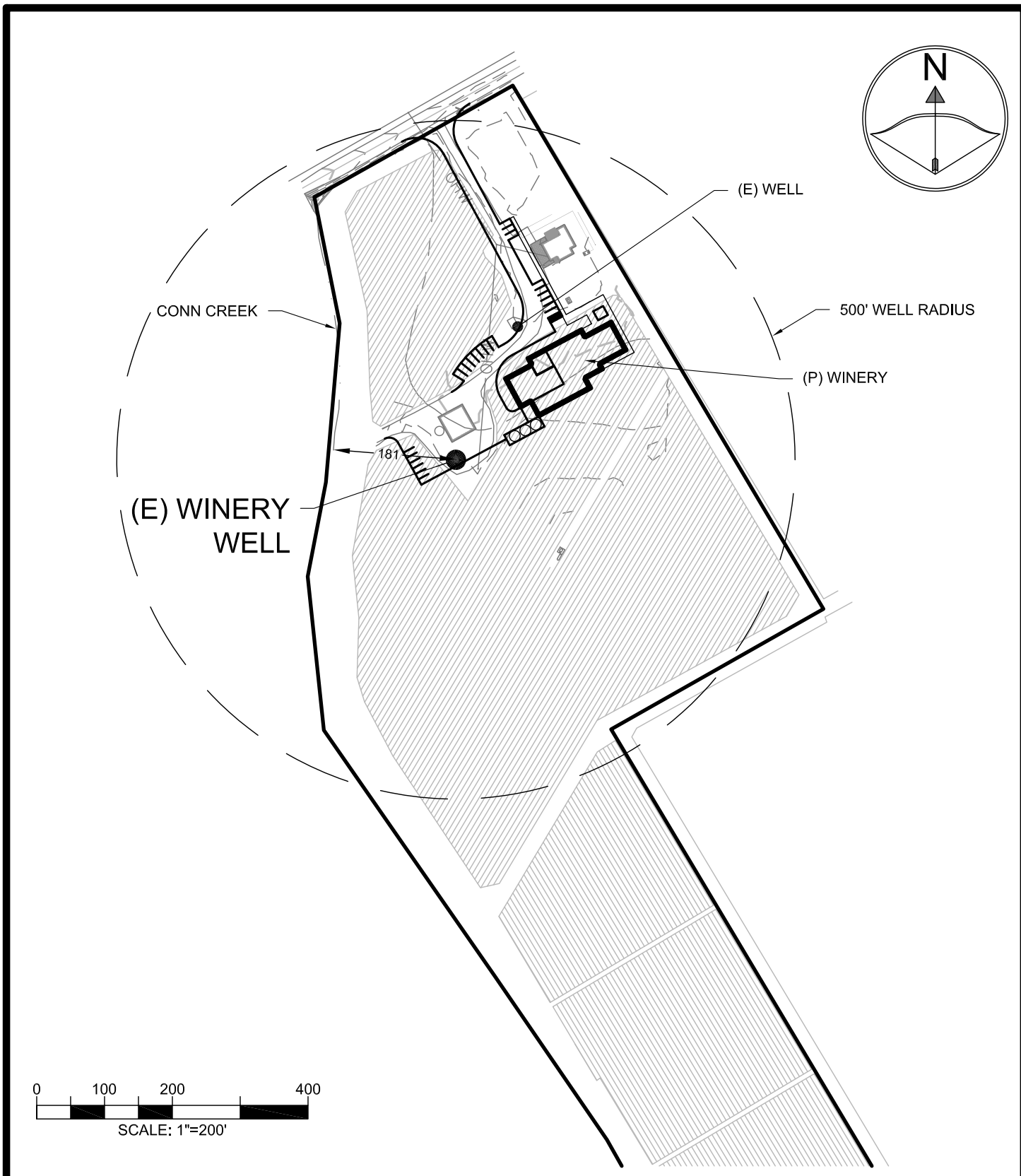
Attachment “A”

Denial of Service Documentation

No Denial of Service Documentation supplied because the nearest public water system is more than 3 miles away, thus Denial of Service Documentation is not applicable to this project.

Attachment “B”

Well Location Map



WELL LOCATION MAP

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
(707) 266-2559

SHEET: 1 OF 1

P #: 00212

DATE: 12/13/2021



Attachment “C”

Well Yield Reports



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		
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.				

All Major Brands Available

ORIGINAL
File with DWR

Page 1 of 1

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

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	

GEOLOGIC LOG

WELL OWNER

ORIENTATION (✓) ☒ VERTICAL ☐ HORIZONTAL ☐ ANGLE (SPECIFY)		
DEPTH FROM SURFACE		
FL.	to FL.	
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

CONTINUED CASING LAYOUT

DEPTH FROM SURFACE	FL.	to FL.	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"	

Name [REDACTED]
Mailing Address [REDACTED] CA [REDACTED]
City [REDACTED] STATE [REDACTED] ZIP [REDACTED]

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. [REDACTED]

LOCATION SKETCH
NORTH
WEST
EAST
SOUTH
1555 SKELLENGER LANE
HORSE
BARN
WELL
225'
400'
CORN CREEK

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 ☐
REMEDIATION ☐
OTHER (SPECIFY) ☐

WATER LEVEL & YIELD OF COMPLETED WELL

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

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.

DEPTH FROM SURFACE			BORE - HOLE DIA. (Inches)	CASING (S)					DEPTH FROM SURFACE			ANNULAR MATERIAL						
				TYPE (✓)				MATERIAL / GRADE				INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)	TYPE			
FL.	to	FL	BLANK	SCREEN	CON- DUCTOR	FILL PIPE									FL.	to	FL	CE- MENT (✓)
0		650	15								0		53	✓			10 SK / SAND	
0		60		✓				PVC F480	8	SDR-21			53	640			✓	#6 SAND
60		120			✓			PVC F480	8	SDR-21								
120		160		✓				PVC F480	8	SDR-21								
160		340			✓			PVC F480	8	SDR-21								
340		390		✓				PVC F480	8	SDR-21								

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

ADDRESS

Napa

CITY

CA

STATE

94559

ZIP

Signed

WELL DRILLER/AUTHORIZED REPRESENTATIVE

08/06/11

DATE SIGNED

439-746

C-57 LICENSE NUMBER

Attachment “D”

Water Availability Calculations
and Supporting Documents
(Coming Soon)



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



Water Availability Analysis 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 Calculates

Important Value Requires Input

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

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 AVAILABILTY 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 =	1.00	25.41	25.41
TOTAL AVAILABLE WATER =	8279309.81	G/YR	
TOTAL AVAILABLE WATER =	25.41	AF/YR	
TOTAL EXISTING WATER USE=	10.18	AF/YR	
REMAINING AVAILABLE WATER =	15.23	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 & LANDSCAPING	81015	0.000003069	0.25
OTHER=	0	0.000003069	0.00
OTHER2=	0	0.000003069	0.00
		SUB TOTAL=	0.71
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=	0.71	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=	3286149	G/YR	
TOTAL PROPOSED WATER USE=	10.09	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 =	1.00	25.41	25.41
TOTAL WATER AVAILABLE =	8279309.81	G/YR	
TOTAL WATER AVAILABLE =	25.41	AF/YR	
TOTAL PROPOSED WATER USE=	10.09	AF/YR	
REMAINING AVAILABLE WATER =	15.32	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: 1213/2021

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 Dimestic 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 Dimestic 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 Dimestic Flow =	165.00	gal/day

Winery Peak Domestic Wasteflows =	225.00	gal/day
--	---------------	----------------

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

Attachment “E”

LAFCO Documentation

No LAFCO Documentation supplied because the nearest public water system is more than 3 miles away, thus LAFCO ocumentation is not applicable to this project.