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Water Availability Analysis



WATER AVAILABILITY ANALYSIS

FOR

SHADYBROOK ESTATE WINERY
100 RAPP LANE
NAPA, CA

APN: 052-170-019

Property Owner:

Alice Alkossler
100 Rapp Lane
Napa, CA 94559

Project #4118019.0

July 09, 2018





I. Executive Summary

The Shadybrook Estate Winery (APN 052-170-019) proposes to increase production from 30,000 to 70,000 gallons of wine per year with an increase in full time employees and visitors. The parcel has an area of 11.37 acres and an allowed groundwater usage of 4.32 af/yr per Napa County Groundwater Permit 90-00069. The groundwater permit was revised per UP Mod P06-01095-UP to 3.41 af/yr. The winery has an existing Domestic Water Supply Permit for a Public Water System with state ID# 28-00046.

Rapp Equestrian Center on the adjacent parcel (APN 052-170-018) under common ownership has an area of 11.97 acres and the benefit of a groundwater usage of 4.16 af/yr per Napa County Groundwater Permit 90-00051. The Equestrian Center currently irrigates with well water.

The applicant, who owns both parcels, requests consolidation of the required public water system for the Shadybrook Estate Winery with the Rapp Equestrian Center.

Below is a summary of the existing and proposed water use for both parcels. Detailed calculations can be found on the next page.

Usage Type		Approved Well Water Usage [af/yr]	Proposed Well Water Usage [af/yr]
Equestrian Center	Residential Domestic Water	0.83	0.83
	Equestrian Center Employees, Visitors, Events, Horses, and Landscaping	1.80	1.80
	Irrigation Vineyard	1.53	1.53
	<i>Equestrian Center Total</i>	4.16	4.16

Usage Type		Existing Well Water Usage [af/yr]	Proposed Well Water Usage [af/yr]
Winery	Residential Domestic Water	0.50	0.50
	Winery Process Water	0.46	1.07
	Domestic Water	0.11	0.33
	Landscaping	0.32	0.32
	Irrigation Vineyard	2.02	2.02
	<i>Irrigation from MST</i>	0	-1.83
<i>Winery Total</i>		3.41	2.41

The proposed modifications to the Rapp Ranch Winery will result in a net decrease in the use of groundwater by 1.0 af/yr (326,000 gallons). The proposed modifications to the Rapp Equestrian Center will result in no change in the use of groundwater. The resultant groundwater demand for both parcels will be less than the associated groundwater permits and use permit allocation.



II. Groundwater Use Calculation

Existing Water Demand

Existing Equestrian Center Demand

Primary Residence (allowance from Groundwater Permit) =	0.50	af/yr
Secondary Residence (allowance from Groundwater Permit) =	0.33	af/yr
Total =	0.83	af/yr

Existing Vineyard Irrigation Water Demand

Vineyard – Irrigation only – (0.3 af/ac-yr x 5.1 acres vineyard) =	1.53	af/yr
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Existing Equestrian Center Domestic Water Demand

Landscape – (1 af/yr/acre x 0.83 acre) =	0.83	af/yr
Horses - (10 gal/horse/day x 60 horses) =	0.67	af/yr
FT Employees – (15 gal/person/day x 260 days/yr x 7 employees/day) =	0.08	af/yr
PT Employees – (15 gal/person/day x 156 days/yr x 2 employees/day) =	0.01	af/yr
Marketing Events – (30 visitors @ 10 gal/guest x 6 days/yr) =	0.01	af/yr
Marketing Events – (50 visitors @ 10 gal/guest x 6 days/yr) =	0.01	af/yr
Marketing Events – (100 visitors @ 10 gal/guest x 6 days/yr) =	0.02	af/yr
Marketing Staff – (2 people @ 15 gal/person x 6 days/yr) =	0.00	af/yr
Marketing Staff – (3 people @ 15 gal/person x 6 days/yr) =	0.00	af/yr
Marketing Staff – (4 people @ 15 gal/person x 6 days/yr) =	0.00	af/yr
Visitors – (50 people @ 3 gal/person x 365 days/yr) =	0.17	af/yr
Total =	1.80	af/yr
Total Existing Water Demand	Total =	4.16 af/yr

Approved Winery Demand

Residence (allowance from Groundwater Permit) =	0.50	af/yr
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Approved Vineyard Irrigation and Landscaping Water Demand

Vineyard – Irrigation only – (0.3 af/ac-yr x 6.74 acres vineyard) =	2.02	af/yr
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Approved Winery Process Water Demand

Process Water – (5-gal water / 1-gallon wine x 30,000 gal wine/year) =	0.46	af/yr
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Approved Winery Domestic Water Demand

FT Employees – (15 gal/person/day x 260 days/yr x 2 employees/day) =	0.02	af/yr
PT Employees – (15 gal/person/day x 156 days/yr x 1 employees/day) =	0.01	af/yr
Visitors – (3 gal/person/day x 52 weeks/yr x 147 visitors/week) =	0.07	af/yr
Marketing Events – (30 visitors @ 10 gal/guest x 9 days/yr) =	0.00	af/yr
Marketing Staff – (2 people @ 15 gal/person x 9 days/yr) =	0.00	af/yr
Total =	0.11	af/yr
Landscape – (1 af/yr/acre x 0.32 acre) =	0.32	af/yr
Total Existing Water Demand	Total =	3.41 af/yr



Proposed Water Demand

Proposed Equestrian Center Demand

Primary Residence (allowance from Groundwater Permit) =	0.50	af/yr
Secondary Residence (allowance from Groundwater Permit) =	0.33	af/yr
Total =	0.83	af/yr

Proposed Vineyard Irrigation and Landscaping Water Demand

Vineyard – Irrigation from well – (0.3 af/ac-yr x 5.1 acres vineyard) =	1.53	af/yr
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Proposed Equestrian Center Domestic Water Demand

Landscape – Irrigation from well – (1 af/yr/acre x 0.83 acre) =	0.83	af/yr
Horses - (10 gal/horse/day x 60 horses) =	0.67	af/yr
FT Employees – (15 gal/person/day x 260 days/yr x 7 employees/day) =	0.08	af/yr
PT Employees – (15 gal/person/day x 156 days/yr x 2 employees/day) =	0.01	af/yr
Marketing Events – (30 visitors @ 10 gal/guest x 6 days/yr) =	0.01	af/yr
Marketing Events – (50 visitors @ 10 gal/guest x 6 days/yr) =	0.01	af/yr
Marketing Events – (100 visitors @ 10 gal/guest x 6 days/yr) =	0.02	af/yr
Marketing Staff – (2 people @ 15 gal/person x 6 days/yr) =	0.00	af/yr
Marketing Staff – (3 people @ 15 gal/person x 6 days/yr) =	0.00	af/yr
Marketing Staff – (4 people @ 15 gal/person x 6 days/yr) =	0.00	af/yr
Visitors – (50 people @ 3 gal/person x 365 days/yr) =	0.17	af/yr
Total =	1.80	af/yr
Total Proposed Water Demand	Total =	4.16 af/yr

Proposed Winery Demand

Residence (allowance from Groundwater Permit) =	0.50	af/yr
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Proposed Vineyard Irrigation and Landscaping Water Demand

Vineyard – Irrigation only – (0.3 af/ac-yr x 6.74 acres vineyard) =	2.02	af/yr
Vineyard – Irrigation from MST pipeline – (0.3 af/ac-yr x 6.1 acres vineyard) =	-1.83	af/yr

Proposed Winery Process Water Demand

Process Water – (5-gal water / 1-gallon wine x 70,000 gal wine/year) =	1.07	af/yr
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Proposed Winery Domestic Water Demand

FT Employees – (15 gal/person/day x 260 days/yr x 9 employees/day) =	0.11	af/yr
PT Employees – (15 gal/person/day x 156 days/yr x 2 employees/day) =	0.01	af/yr
Average Visitors – (3 gal/person/day x 52 weeks/yr x 350 visitors/week) =	0.17	af/yr
Marketing Events – (30 visitors @ 10 gal/guest x 6 days/yr) =	0.01	af/yr
Marketing Events – (50 visitors @ 10 gal/guest x 6 days/yr) =	0.01	af/yr
Marketing Events – (100 visitors @ 10 gal/guest x 6 days/yr) =	0.02	af/yr
Marketing Staff – (2 people @ 15 gal/person x 6 days/yr) =	0.00	af/yr
Marketing Staff – (3 people @ 15 gal/person x 6 days/yr) =	0.00	af/yr
Marketing Staff – (4 people @ 15 gal/person x 6 days/yr) =	0.00	af/yr
Total =	0.33	af/yr
Landscape – (1 af/yr/acre x 0.32 acre) =	0.32	af/yr
Total Proposed Water Demand	Total =	2.41 af/yr



A Tradition of Stewardship
A Commitment to Service

Planning, Building & Environmental Services

1195 Third Street, Suite 210
Napa, CA 94559
www.countyofnapa.org

Pete Parkinson
Interim Director

July 23, 2014

Frank D'Ambrosio
Chateau Lane Winery
100 Rapp Ln
Napa, CA 94558

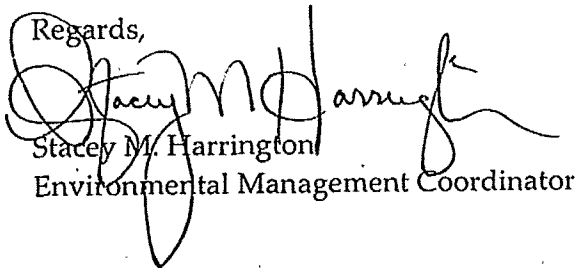
SUBJECT: Domestic Water Supply Permit for Chateau Lane Winery Water System, state ID# 28-00046
(WS#266079PMT)

Dear Mr. D'Ambrosio,

Enclosed is the water supply permit for the Chateau Lane Winery Water System, which includes conditions of operation. If you have any questions, please feel free to contact me or your District Inspector, Delfin Dominguez.

Sincerely,

Regards,


Stacey M. Harrington
Environmental Management Coordinator

STATE OF CALIFORNIA

DOMESTIC WATER SUPPLY PERMIT

Issued To

Verismo Winery Water System

28-00046

By

Napa County Division of Environmental Health



PERMIT ID NUMBER 266079

DATE: June 30, 2014

WHEREAS:

1. Materials dated *November 12, 2012*, were submitted on behalf of *Frank D. Ambrosio*, owner of *Verismo Winery*, to *Napa County Division of Environmental Health* to operate a public water system to serve a food facility.
2. This public water system is known as the *Verismo Winery Water System*, whose headquarters is located at *100 Rapp Lane, Napa, CA 94558*.
3. The legal owner of the *Verismo Winery Water System* is *Frank D. Ambrosio*. *Frank D. Ambrosio*, therefore, is responsible for compliance with all statutory and regulatory drinking water requirements and the conditions set forth in this permit.
4. The public water system for which the permit application has been submitted is as described briefly below:

Verismo Winery Water System is a CalCode water system, serving the *Verismo Winery* on parcel 052-170-019. This system is served by a single 6" cased well, located near the south parcel line.

5. The service area of *Verismo Winery Water System* shall be shown on the service area map on page 5 of the Permit Report and the water system components shall be shown on the water system schematic on page 5.

And WHEREAS:

1. **Frank D. Ambrosio** has submitted all of the required information relating to the proposed operation of the **Verismo Winery Water System**.
2. The **Napa County Division of Environmental Health** has evaluated all of the information submitted by **Frank D. Ambrosio** and has conducted a physical investigation of the proposed **Verismo Winery Water System**.
3. The **Napa County Division of Environmental Health** has delegated authority to issue domestic water supply permits pursuant to Health and Safety Code Section 116540.

THEREFORE:

The **Napa County Division of Environmental Health** has determined the following:

1. The **Verismo Winery Water System** meets the criteria for and is hereby classified as a **CalCode** water system.
2. Provided the following conditions are complied with, the **Verismo Winery Water System** should be capable of providing water to consumers that is pure, wholesome, and potable and in compliance with statutory and regulatory drinking water requirements at all times and meet the requirements for water provided to a permitted food facility as described in the California Retail Food Code, Chapter 7, Article 1.

**FRANK D. AMBROSIO IS HEREBY ISSUED THIS DOMESTIC WATER
SUPPLY PERMIT TO OPERATE THE VERISMO WINERY WATER
SYSTEM.**

VERISMO WINERY WATER SYSTEM shall comply with the following permit conditions:

1. The only sources approved for potable water supply are as follows:

Source	PS Code	Status	Capacity	Comments
001	2800046-001	Active	35 gpm	When constructed

One 10,000-gallon concrete is the only storage approved for this water system.

No treatment is approved for this system.

No changes, additions, or modifications shall be made to the sources or treatment mentioned in Condition No. 1 unless an amended water permit has first been obtained from the Division.

2. Bacteriological and chemical tests shall be performed in compliance with the requirements of the California Drinking Water Standards, and the water system shall comply with all reporting requirements. **Quarterly bacteriological reports from an approved lab must be submitted to this office no later than the 10th day following the sampling period.** See attached chemical testing schedule. All source monitoring must be submitted to the lab using the correct source code.

Direct the laboratory to submit all chemical sampling to the California Department of Public Health using the source code, 2800046-001, within **30 days**.

3. Install a downturned, non-threaded sampling tap and a downturned, screened vent or other approved means to release a vacuum and seal all openings, including the opening in the junction box within **30 days**.
4. Label water system components within 30 days and have staff trained to maintain the water system safely.
5. Collect additional bacteriological samples any time the following occurs:

After construction or repair of wells;
After main installation or repair;
After construction, repair, or maintenance of storage facilities; and
After any system pressure loss to less than five psi. Samples collected shall represent the water quality in the affected portions of the system.

6. All water supplied by the Company for domestic purposes shall meet all Maximum Contaminant Levels (MCLs) and Action Levels (ALs) established by the State Department of Health Services. If the water quality does not comply with the California Drinking Water Standards, treatment shall be provided to meet standards.
7. This permit may be revoked or suspended for failure to comply with the California State Health and Safety Code, California Code of Regulations and Title 13 of the Napa County Code Relating to Wells and Water Supply Systems.

This permit supersedes all previous domestic water supply permits issued for this public water system and shall remain in effect unless and until it is amended, revised, reissued, or declared to be null and void by the **Napa County Division of Environmental Health**. This permit is non-transferable. Should the **Verismo Winery Water System** undergo a change of ownership, the new owner must apply for and receive a new domestic water supply permit.

Any change in the source of water for the water system, any modification of the method of treatment as described in the Permit Report, or any addition of distribution system storage reservoirs shall not be made unless an application for such change is submitted to the **Napa County Division of Environmental Health**.

Groundwater Permit #90-00069 for parcel 052-170-019 (Shadybrook Winery)

Based on the above considerations and testimony the following has been determined:

Water Using Activity	Applicant's requested water allotment (AF/YR) as submitted on application	Director's allowed water allotment (AF/YR)
Primary Residence	0.75	0.5*
Rapp Ranch Horse Facility	1.8	1.8
Vineyard-6.74 acres	3.37**	2.02***
Total	5.92	4.32

* Subsequent information submitted by the applicant's representative after the initial application submittal indicated the amount of water allotted to this house was estimated at 0.5 acre feet per year, as such, this number is being used in the final decision

** Application requested 0.5 acre-feet of water per acre of vineyard

*** Director allowed 0.3 acre-feet of water per acre of vineyard, a number reported by the Department of Public Works to be a reasonable number for vineyard irrigation in the area.

With the changes noted above, and the Permit being granted for a total of 4.32 acre feet of water per year, a number less than the existing water use, the application process has demonstrated that the requested Permit, as modified in this final decision, would not significantly affect the Milliken-Sarco-Tulocay groundwater basin.

7. *The groundwater use will not have a negative impact on agriculture in the Milliken-Sarco-Tulocay groundwater basin.*

The area in which the D' Ambrosio parcel is located is composed of agricultural lands most of which is planted in vineyard with scattered low density residential housing. The application proposes to install two-ten thousand gallon water storage tanks associated with Erosion Control Plan 02008-ECP to provide water to a single family dwelling, 6.74 acres of vineyard, and one half of the Rapp Ranch horse facility which includes boarding of approximately 30 horses. The application does not propose to use any additional water, and for the reasons set forth in Finding 6, this Permit (as modified from the original application request) will not have a negative impact on agriculture in the Milliken-Sarco-Tulocay groundwater basin.

8. *The groundwater use will not degrade water quality in the area.*

No credible evidence has been presented that the issuance of this Permit will result in a degradation of water quality.

Groundwater Permit #90-00051 for parcel #052-170-018 (Equestrian Center)

Based on the above considerations and testimony the following has been determined:

Water Using Activity	Applicant's requested water allotment (AF/YR) as submitted on application	Director's allowed water allotment (AF/YR)
Primary Residence	0.75	0.5*
Secondary Residence	0.33	0.33
Rapp Ranch Horse Facility	1.8	1.8
Vineyard-5.09 acres	2.54**	1.53***
Total	5.42	4.16

- * Subsequent information submitted by the applicant's representative after the initial application submittal indicated the amount of water allotted to this house was estimated at 0.5 acre feet per year, as such, this number is being used in the final decision
- ** Application requested 0.5 acre-feet of water per acre of vineyard
- *** Director allowed 0.3 acre-feet of water per acre of vineyard; a number reported by the Department of Public Works to be a reasonable number for vineyard irrigation in the area.

With the changes noted above, and the Permit being granted for a total of 4.16 acre feet of water per year, a number less than the existing water use, the application process has demonstrated that the requested Permit, as modified in this final decision, would not significantly affect the Milliken-Sarco-Tulocay groundwater basin.

7. *The groundwater use will not have a negative impact on agriculture in the Milliken-Sarco-Tulocay groundwater basin.*
 The area in which the D' Ambrosio parcel is located is composed of agricultural lands most of which is planted in vineyard with scattered low density residential housing. The application proposes to install two-ten thousand gallon water storage tanks associated with Erosion Control Plan 02008-ECP to provide water to a primary residence, second dwelling unit, 5.09 acres of vineyard, and one half of the Rapp Ranch horse facility which includes boarding of approximately 30 horses. The application does not propose to use any additional water, and for the reasons set forth in Finding 6, this Permit (as modified from the original application request) will not have a negative impact on agriculture in the Milliken-Sarco-Tulocay groundwater basin.

8. *The groundwater use will not degrade water quality in the area.*
 No credible evidence has been presented that the issuance of this Permit will result in a degradation of water quality.

9. *The groundwater use will have no adverse effects on the reasonable and beneficial uses of groundwater.*

**NAPA COUNTY CONSERVATION, DEVELOPMENT AND PLANNING DEPARTMENT
CONSERVATION & DEVELOPMENT PLANNING COMMISSION**

**CONDITIONS OF APPROVAL
D'AMBROSIO WINERY
USE PERMIT # P06-01095-UP
APN # 052-170-019**

1. SCOPE: The permit shall be limited to:

- Wine production of no more than 30,000 gallons per year (consistent with the Napa County Winery Production Process);
- Conversion of an existing barn with 1,645 square feet of offices, 1,332 square feet of storage / warehouse and 7,571 square feet of production for a winery totaling 10,548 square feet;
- Hours of operation for the winery shall be limited to 9:00 AM to 5:00 PM, Monday-Sunday (except during crush);
- Two full-time and one part-time employees
- Removal of the existing domestic sewage disposal system on-site and replacement with an Orenco Advantex pre-treatment and surface drip irrigation system for disposal of process wastewater;
- Maximum Milliken-Sarco-Tulocay (MST) Groundwater Deficient Area annual fair share water use of 3.41 acre feet/year, superceding previous Groundwater Permit # 90-00069 water use limits;
- On-site improvement of an existing vineyard avenue from Rapp Lane to the converted winery building for on-site access to County standards;
- Five on-site parking spaces;
- Located on Assessor's Parcel Number 052-170-019:

The winery shall be designed in substantial conformance with the submitted site plan, elevation drawings, and other submittal materials and shall comply with all requirements of the Napa County Code. It is the responsibility of the applicant to communicate the requirements of these conditions and mitigations (if any) to all designers, contractors, employees, and guests of the winery to ensure compliance is achieved. Any expansion or changes in use shall be by the approved in accordance with Section 18.124.130 of the Napa County Code and may be subject to the Use Permit modification process.

2. MARKETING: Marketing events shall be limited as follows:

a. Catered Food and Wine

Frequency: Eight (8) times per year
Number of persons: 30 maximum
Time of Day: Between 11:00 AM to 10:00 PM

b. Wine Auction

Frequency: One (1) time per year
Number of persons: 30 maximum
Time of Day: Between 11:00 AM to 10:00 PM