

**PHASE ONE WATER AVAILABILITY ANALYSIS FOR
THE MOUNTAIN PEAK WINERY
3265 SODA CANYON ROAD, NAPA, CA 94558
APN 032-500-033**

As required by Napa County Planning, Building & Environmental Services, this report outlines a Phase One Water Availability Analysis for the Mountain Peak Winery Use Permit Application.

Site Plan

A USGS site map showing the site and approximate property line locations is attached. Information regarding the location of the existing wells and structures are shown on the enclosed Use Permit Drawings prepared by Bartelt Engineering dated May 2014. Information regarding the location of the existing wells on adjacent properties was unavailable at the time this report was prepared.

Project Description

Currently, the subject parcel is a 41.76± acre parcel containing a residence with some minor landscaped areas, vineyards and miscellaneous structures associated with vineyard operations. The subject parcel currently has an approved Track II Vineyard Erosion Control Plan¹ for 28.00± acres of vineyard that will primarily remain in production.

The purpose of this analysis is to evaluate the feasibility of constructing and operating a 100,000 gallons per year winery on a portion of the subject parcel. Along with the proposed wine production at the site, the project proposes a moderate staffing and marketing plan. The project proposes nineteen (19) full-time employees, four (4) part-time and four (4) seasonal (harvest) employees. The project also proposes to offer private tour and tasting appointments for a maximum number of eighty (80) guests per day and 350 guests per week. Furthermore, the Applicant plans to offer three (3) food and wine pairing events per month for parties up to 12 persons and three (3) food and wine pairing events per month for parties up to 24 persons. Additionally, the Applicant intends to host four (4) wine club/release events per year for groups of up to 75 persons and two (2) other 125 person auction related event at the winery.

MAP II & III

¹ Refer to Bartelt Engineering's Track II Vineyard Erosion Control Plan prepared for Mountain Peak Vineyard, LLC dated June 2013. Napa County P13-00144-ECPA.

Projected Water Consumption

The total water consumption for the existing and proposed uses on the parcel is calculated below using the Napa County Engineering & Conservation Division Water Availability Analysis, Phase I Study, Attachment A: Estimated Water Use Guidelines.

Current Water Use

Residence (Primary)	0.75 acre-feet/year
Vineyard (28.00± acres of irrigation)	14.00 acre-feet/year
Total	<u>14.75 acre-feet/year</u>

Proposed Water Use

Winery (Process Water; 100,000 gallons per year)	2.15 acre-feet/year
Winery (Domestic and Landscaping)	0.50 acre-feet/year
Vineyard ² (22.80± acres of irrigation)	11.40 acre-feet/year
Vineyard (8.00 acres of heat and frost protection)	4.00 acre-feet/year
Total	<u>18.05 acre-feet/year</u>

Allowable Water Allotment³

The following calculation assumes that the entire 41.76 acre parcel lies in an area designated as "Mountain Areas".

0.5 acre-feet/acre of water is allotted for parcels located on the Mountain Areas.

Allowable water allotment = 41.76 acres x 0.5 acre-feet/year = 20.88 acre-feet/year

The above analysis shows that the projected water usage will be greater than the current water usage and **less than** the allowable water allotment for the subject parcel.

² This project's proposed improvements require the removal of 5.2± acres of vineyard approved under the Track II Vineyard ECP, Napa County P13-00144-ECPA.

³ Calculation based on the Napa County Policy for water usage.

Existing and Proposed Water Source and Storage Capacity

According to multiple reports, the existing onsite well is capable of producing a flow rate in excess of 40 gallons per minute⁴ (gpm). The existing well is currently used to satisfy domestic and vineyard irrigation demands. Under this Use Permit, the existing well will be transitioned to satisfy future fire protection demands as well as landscape and vineyard irrigation demands. This project is also considering reusing wastewater as an additional source for vineyard irrigation.

It is our understanding that this project may be required to install a Transient Non-Community Water System as a result of the proposed Use Permit Application. A transient non-community water system is identified as a system that has less than five (5) connections, serves less than 25 yearlong residents⁵, serves 25 people per day at least 60 days per year and serves not more than 25 of the same people at least six (6) months out of the year. The four (4) seasonal employees are not considered yearlong residents. Therefore, Bartelt Engineering has included a Technical, Managerial and Financial (TMF) Capacity Worksheet document in the project's Use Permit Application package.

To comply with State regulations for a Water System, a new well will be drilled to meet the annular seal depth and satisfy domestic and production demand requirements. Currently, ground water is pumped from the existing well into onsite storage tanks on the parcel and then supplied to the vineyard and residence. The proposed project will use the existing well to pump ground water to proposed onsite vineyard irrigation tank(s) and fire protection storage tank(s)/cistern and the new constructed well to pump ground water to proposed domestic storage tank(s)/cistern. New pumps will then distribute the two (2) sources' stored water as appropriate to the Winery, Tasting Room, Administrative Offices and vineyards as needed. Treated wastewater will complement the existing well as a source for vineyard irrigation.

Summary and Conclusions

The estimated water demand for the proposed Mountain Peak Winery Use Permit Application is projected to be less than the allowable water allotment for the parcel in accordance with the Napa County Water Availability Policy. The above information and the Use Permit Drawings should assist you in processing the subject Use Permit Application.



⁴ Doshier-Gregson Pump & Well Service *Surface Inspection Report*, dated 9/17/2012, and *Water Well Drillers Report*, dated July 31, 1991. McLean & Williams Well Drilling & Pump Service *Inspection Report*, dated April 18-24, 2014.

⁵ Yearlong resident is considered an individual served by the water system for 183 or more days annually.



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WATER AVAILABILITY ANALYSIS - PHASE ONE STUDY

Introduction: As an applicant for a permit with Napa County, It has been determined that Chapter 13.15 of the Napa County Code is applicable to approval of your permit. One step of the permit process is to adequately evaluate the amount of water your project will use and the potential impact your application might have on the static groundwater levels within your neighborhood. The public works department requires that a Phase 1 Water Availability Analysis (WAA) be included with your application. The purpose of this form is to assist you in the preparation of this analysis. You may present the analysis in an alternative form so long as it substantially includes the information required below. Please include any calculations you may have to support your estimates.

The reason for the WAA is for you, the applicant, to inform us, to the best of your ability, what changes in water use will occur on your property as a result of an approval of your permit application. By examining the attached guidelines and filling in the blanks, you will provide the information we require to evaluate potential impacts to static water levels of neighboring wells.

Step #1:

Provide a map and site plan of your parcel(s). The map should be an 8-1/2"x11" reproduction of a USGS quad sheet (1:24,000 scale) with your parcel outlined on the map. Include on the map the nearest neighboring well. The site plan should be an 8-1/2"x11" site plan of your parcel(s) with the locations of all structures, gardens, vineyards, etc in which well water will be used. If more than one water source is available, indicate the interconnecting piping from the subject well to the areas of use. Attach these two sheets to your application. If multiple parcels are involved, clearly show the parcels from which the fair share calculation will be based and properly identify the assessor's parcel numbers for these parcels. Identify all existing or proposed wells

Step #2: Determine total parcel acreage and water allotment factor. If your project spans multiple parcels, please fill a separate form for each parcel.

Determine the allowable water allotment for your parcels:

Parcel Location Factors

The allowable allotment of water is based on the location of your parcel. There are 3 different location classifications. Valley floor areas include all locations that are within the Napa Valley, Pope Valley and Carneros Region, except for areas specified as groundwater deficient areas. Groundwater deficient areas are areas that have been determined by the public works department as having a history of problems with groundwater. All other areas are classified as Mountain Areas.

Please underline your location classification below (Public Works can assist you in determining your classification if necessary):

Valley Floor	1.0 acre feet per acre per year
<u>Mountain Areas</u>	<u>0.5 acre feet per acre per year</u>
MST Groundwater Deficient Area	0.3 acre feet per acre per year

Assessor's Parcel Number(s)	Parcel Size (A)	Parcel Location Factor (B)	Allowable Water Allotment (A) X (B)
032-500-033	41.76	0.5	20.88 acre-feet per year

Step #3:

Using the guidelines in Attachment A, tabulate the existing and projected future water usage on the parcel(s) in acre-feet per year (af/yr). Transfer the information from the guidelines to the table below.

EXISTING USE:		PROPOSED USE:	
Residential	<u>0.75</u> af/yr	Residential	<u>0.00</u> af/yr
Farm Labor Dwelling	<u>0.00</u> af/yr	Farm Labor Dwelling	<u>0.00</u> af/yr
Winery	<u>0.00</u> af/yr	Winery	<u>2.65</u> af/yr
Commercial	<u>0.00</u> af/yr	Commercial	<u>0.00</u> af/yr
Vineyard*	<u>14.00</u> af/yr	Vineyard*	<u>15.40</u> af/yr
Other Agriculture	<u>0.00</u> af/yr	Other Agriculture	<u>0.00</u> af/yr
Landscaping	<u>0.00</u> af/yr	Landscaping	<u>0</u> af/yr
Other Usage (List Separately):		Other Usage (List Separately):	
_____	_____ af/yr	_____	_____ af/yr
_____	_____ af/yr	_____	_____ af/yr
_____	_____ af/yr	_____	_____ af/yr

TOTAL: 14.75 af/yr
4,806,328 gallons**


TOTAL: 18.05 af/yr
TOTAL: 5,881,642 gallons**

Is the proposed use less than the existing usage? Yes No Equal

Step #4:

Provide any other information that may be significant to this analysis. For example, any calculations supporting your estimates, well test information including draw down over time, historical water data, visual observations of water levels, well drilling information, changes in neighboring land uses, the usage if other water sources such as city water or reservoirs, the timing of the development, etc. Use additional sheets if necessary.

Conclusion: Congratulations! Just sign the form and you are done! Public works staff will now compare your projected future water usage with a threshold of use as determined for your parcel(s) size, location, topography, rainfall, soil types, historical water data for your area, and other hydrogeologic information. They will use the above information to evaluate if your proposed project will have a detrimental effect on groundwater levels and/or neighboring well levels. Should that evaluation result in a determination that your project may adversely impact neighboring water levels, a phase two water analysis may be required. You will be advised of such a decision.

Signature:  Date: May 21, 2014 Phone: (707) 258-1301

Mountain Peak Vineyards, LLC
Phase One Water Availability Analysis

WATER AVAILABILITY ANALYSIS - PHASE ONE STUDY

Attachment A: Estimated Water Use Guidelines

Typical Water Use Guidelines:

Primary Residence	0.5 to 0.75 acre-feet per year (includes some landscaping)
Secondary Residence	0.20 to 0.30 acre-feet per year
Farm Labor Dwelling	0.06 to 0.10 acre-feet per person per year

Non-Residential Guidelines:

Agricultural:

Vineyards	
Irrigation only	0.2 to 0.5 acre-feet per acre per year
Heat Protection	0.25 acre feet per acre per year
Frost Protection	0.25 acre feet per acre per year
Farm Labor Dwelling	0.06 to 0.10 acre-feet per person per year
Irrigated Pasture	4.0 acre-feet per acre per year
Orchards	4.0 acre-feet per acre per year
Livestock (sheep or cows)	0.01 acre-feet per acre per year

Winery:

Process Water	2.15 acre-feet per 100,000 gal. of wine
Domestic and Landscaping	0.50 acre-feet per 100,000 gal. of wine

Industrial:

Food Processing	31.0 acre-feet per employee per year
Printing/Publishing	0.60 acre-feet per employee per year

Commercial:

Office Space	0.01 acre-feet per employee per year
Warehouse	0.05 acre-feet per employee per year