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## Water Availability Analysis



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**Department of Public Works**

1195 Third Street, Suite 201  
Napa, CA 94559-3092  
www.co.napa.ca.us/publicworks

Main: (707) 253-4351  
Fax: (707) 253-4627

**Donald G. Ridenhour, P.E.**  
Director

**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
Mountain Areas	0.5 acre feet per acre per year
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)
030-090-033	38.9± ac	1.0 af/yr	38.9 af/yr

WATER USE ESTIMATE CALCULATIONS				
	Estimated Water Use (Acre-Feet / Year)			Notes
	Existing		Proposed	
Residential Domestic Water Use				
Residence	0.00		0.00	Based on Napa County Phase 1 Water Availability Analysis Guidelines (Primary Residence)
Total Residential Domestic Water Use	0.00		0.00	
Winery Domestic & Process Water Use				
Winery - Daily Visitors	0.39		0.42	Based on 116 (E) & 125 (P) visitors / day average @ 3 gallons per visitor <sup>(1)</sup>
Winery - Events with Meals Prepared Onsite	0.00		0.05	Based on 52 events @ 20 people @ 15 gallons per guest <sup>(2)</sup>
Winery - Events with Catered Meals	0.04		0.07	Based on 36 events @ 25 people (E) & (P), 0 (E) & 12 (P) events @ 150 people and 3 (E) & 4 (P) events with 500 people @ 5 gallons per guest <sup>(3)</sup>
Winery - Employees	0.35		0.35	Based on 35 (E) existing and 35 (P) employees @ 0.01 ac-ft/yr per employee per Napa County Phase 1 Water Availability Analysis Guidelines
Winery - Process	5.16		5.16	Based on 7 gallons of water per gallon of wine <sup>(4)</sup> @ 240,000 gallons max production
Total Winery Water Use	5.93		6.05	
Ag Processing Center Water Use				
Process Water Use	0.00		0.004	Based on 250 batches x 5 gallons per batches per Frog's Leap
Irrigation Water Use				
Landscape & Other Agriculture	10.00		10.00	Estimated for 2.5 acres of high water use landscaping and orchards at 4 ac-ft/ac/yr (conservative)
Total Irrigation Water Use	10.00		10.00	
Total Combined Water Use	15.194		16.05	

<sup>(1)</sup> 3 gallons of water per visitor is based on project wastewater disposal feasibility report by Applied Civil Engineering.

<sup>(2)</sup> 15 gallons of water per guest is based on project wastewater disposal feasibility report by Applied Civil Engineering.

<sup>(3)</sup> 5 gallons of water per guest is based on project wastewater disposal feasibility report by Applied Civil Engineering.

<sup>(4)</sup> Napa County Phase 1 Water Availability Analysis Guidelines estimate 7 gallons of water per gallon of wine produced.