# NAPA COUNTY

DEPARTMENT OF PUBLIC WORKS

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ROBERT J. PETERSON
Director of Public Works
County Surveyor-County Engineer
Road Commissioner


## WATER AVAILABILITY ANALYSIS

PHASE 1 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 assessors 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 circle 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 |

| Assessors Parcel Number(s) | Parcel Size (A) | Parcel Location Factor (B) | Allowable Water Allotment (A) X (B) |
|---|---|---|---|
| 032-090-024 | 10.29 ac | 0.5 AF/acre | 5.1 AF |

**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 | _____ af/yr | Residential | _____ af/yr |
| Farm Labor Dwelling | _____ af/yr | Farm Labor Dwelling | _____ af/yr |
| Winery | _____ af/yr | Winery | 0.53 af/yr |
| Commercial | _____ af/yr | Commercial | _____ af/yr |
| Vineyard* | _____ af/yr | Vineyard* | _____ af/yr |
| Other Agriculture | _____ af/yr | Other Agriculture | _____ af/yr |
| Landscaping | _____ af/yr | Landscaping | _____ af/yr |
| Other Usage (List Separately): | | Other Usage (List Separately): | |
| _____ | _____ af/yr | _____ | _____ af/yr |
| _____ | _____ af/yr | _____ | _____ af/yr |
| _____ | _____ af/yr | _____ | _____ af/yr |
| **TOTAL:** | 0 af/yr | **TOTAL:** | 0.53 af/yr |
| **TOTAL:** | 0 gallons** | **TOTAL:** | 172,701 gallons** |

*Water use for vineyards should be no lower than 0.2 AF—unless irrigation records are available that show otherwise.

**To determine your existing and proposed total water use in gallons, multiply the totals (in acre- feet) by 325,821 gal/AF.

Is the proposed use less than the existing usage ( ) Yes (X) 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.

See Water Availability Analysis Supporting Calculations prepared by Applied Civil Engineering Incorporated (attached).

**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:** Michael R. Muelrath **Date:** 3/31/2010 **Phone:** (707) 320-4968

## 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 |

# PHASE I WATER AVAILABILITY ANALYSIS
# SUPPORTING CALCULATIONS
FOR
# RELIC WINE CELLARS

LOCATED AT:
2400 Soda Canyon Road
Napa, CA 94558
NAPA COUNTY APN 032-090-024

PREPARED BY:
Applied Civil Engineering Incorporated
2074 West Lincoln Avenue
Napa, California 94558
Telephone: (707) 320-4968
www.appliedcivil.com

## EXISTING WATER USE

**Assumptions:**

The property is not currently being used in a way that generates water demand. Therefore the existing water usage was determined to be 0 Acre-Feet/Year.

**TOTAL EXISTING WATER USAGE 0 Acre-Feet/Year**

## PROPOSED WATER USE

**Assumptions:**

1. Production capacity of proposed winery is 20,000 gallons per year.
2. Per Attachment A, winery usage will include process, domestic and landscaping uses for a total of 2.65 Acre-Feet per 100,000 gallons of wine per year.

**Winery Use**

| | |
|---|---|
| 20,000 | Gallons of Wine/Year |
| 2.65 | Acre-Feet/Year per 100,000 Gallons of Wine |

**0.53 Acre-Feet/Year Total Winery Use**

**TOTAL PROPOSED WATER USAGE 0.53 Acre-Feet/Year**

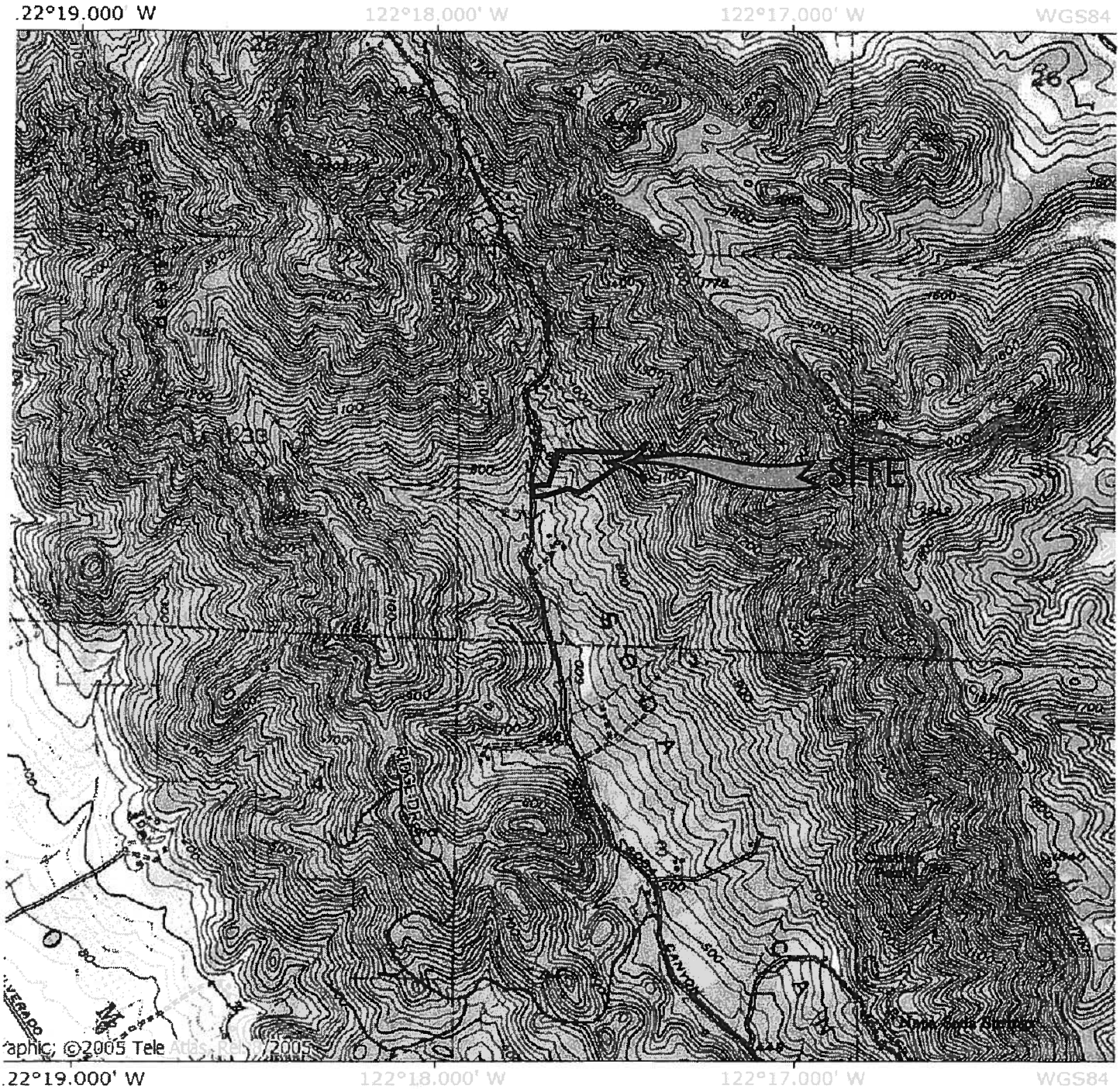
## CONCLUSION

The proposed winery water usage is below the allowable threshold water usage for the parcel.

# SITE TOPOGRAPHY MAP

REPRESENTS A PORTION OF THE USGS 7.5 MINUTE QUADRANGLE "YOUNTVILLE"
REPRODUCED FROM NATIONAL GEOGRAPHIC TOPO!
OUTDOOR RECREATION MAPPING SOFTWARE

SCALE: 1" = 2,000'





APPLIED CIVIL ENGINEERING
INCORPORATED
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(707)320-4968 (707)320-2395 Fax
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## RELIC WINE CELLARS

2400 SODA CANYON ROAD
NAPA, CA 94558
APN 032-090-024

JOB NO. 09-124

MARCH 2010