



NAPA COUNTY

DEPARTMENT OF PUBLIC WORKS

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ROBERT J. PETERSON
Director of Public Works
County Surveyor-County Engineer
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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 Number(s)	Parcel	Parcel Size (A)	Parcel Factor (B)	Location	Allowable Water Allotment (A) X (B)
052-130-041 052-170-044		183.58	0.3		55.07

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:

Residential _____ af/yr
 Farm Labor Dwelling _____ af/yr
 Winery _____ af/yr
Clubhouse 3.2 af/yr
 Vineyard* _____ af/yr
 Other Agriculture _____ af/yr
 Landscaping _____ af/yr
 Other Usage (List Separately):
IRRIGATION _____ af/yr
Groundwater 80 af/yr
Runoff storage 117 af/yr
Recycled 0 af/yr
TOTAL: 200.2 af/yr

PROPOSED USE:

Residential _____ af/yr
 Farm Labor Dwelling _____ af/yr
 Winery _____ af/yr
Clubhouse 3.2 af/yr 3.2 af/yr
 Vineyard* _____ af/yr
 Other Agriculture _____ af/yr
 Landscaping _____ af/yr
 Other Usage Short term Long term
 _____ af/yr
 _____ af/yr 42 af/yr
 _____ af/yr 103 af/yr
 _____ af/yr 24 af/yr
TOTAL: 172.2 af/yr 172.2 af/yr
TOTAL: 56,111,370 gallons** 56,111,370 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.
 325,850

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 of other water sources such as city water or reservoirs, the timing of the development, etc. Use additional sheets if necessary.

SEE 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:  Date: 5-28-08 Phone: 701 252-1111

Napa Valley Country Club (NVCC) uses water for two purposes: irrigation of the golf course and landscaping, and domestic use in the clubhouse. The back nine of the golf course is irrigated from reservoirs filled from surface runoff stored pursuant to water right permits and licenses issued by the State Water Resources Control Board. The front nine, landscaping and domestic use is sourced from groundwater. Total water use is ± 200 acre-feet per year (afa); ± 117 afa is reservoir water and ± 84 afa is groundwater.

The use permit modification proposes to construct a new 10-12 acre-feet (af) reservoir near the entrance to NVCC. The long term goal is to fill this reservoir with recycled water from Napa Sanitation District (NSD) and use it to stage irrigation of the front nine. A single filling of the reservoir will reduce groundwater usage by 10-12 afa. However, it is likely that the reservoir will be filled two to three times during the irrigation season, and it is expected that groundwater use will be reduced by 20-36 afa. The proposed reservoir, coupled with a new, more efficient irrigation system (currently in the design phase) will provide a total reduction of groundwater use of 34-50 afa.

WATER BUDGET
October 27, 2008

- (1) All units expressed as afa (acre-feet/annum)
- (2) After installation of new irrigation system
- (3) After (2) plus construction of Lake E for recycled water
- (4) Average 2850 gpd (gallons/day) for all domestic use facilities includes clubhouse, pool, tennis facilities, 2 restrooms on course
- (5) Based on 2006 usage. Report dated October, 2007
- (6) Includes golf course and landscaping
- (7) 18% (14.4 afa) reduction from existing use
- (8) 24 afa (NSD recycled water) reduction from "short term" usage
- (9) 12% (14.0 afa) reduction from existing use
- (10) Assumes no use of NSD water on Back 9