



Water Availability Memo – SHL Cathiard LLC

Includes: WinTR55 Modeling

March 16, 2020

A full water availability study is not required since the project will use spring water (collected at the source) and existing surface water rights. Attachment D form is attached as a reference on existing and proposed water usage, although no groundwater use is proposed for this project.

REVISED
Attachment D

PHASE I WATER AVAILABILITY ANALYSIS

File #: P _____ - _____ Owner: SHL Cathiard LLC Parcel #: 027 - 100 - 037

This form is intended to help those who must prepare a Phase I Water Availability Analysis. **The Department will not accept an analysis that is not on this form.**

BACKGROUND: A Phase I Water Availability Analysis is done in order to determine what changes in water use will occur on a property as a result of the project. Staff uses this information to determine whether the project may have a adverse effect on groundwater levels. If it may, additional information will be required. You will be advised if additional information is needed.

PERSONS QUALIFIED TO PREPARE: Any person that can provide the needed information

PROCEDURE:

STEP 1: Prepare and attach to this form 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 shown

STEP 2: Determine the allowable groundwater use allotment for your parcel(s).

Total size of parcel(s)		189		acre(s)
Multiply by parcel location factor	x	0.5		acre-foot per acre per year (see back)
Allowable groundwater allotment	=	94.5		acre-foot per year

STEP 3: Determine the estimated water use for all vineyards on your parcel(s) currently and after the planned conversion; actual water usage figures may be substituted for the current usage estimate (please indicate if this is done). Estimate future use for both the vineyard establishment period and thereafter

Current Usage:

Number of <u>planted</u> acres		59		acres
Multiply by number of vines/acre	x	1025		vines per acre
Multiply by gallons/vine/year	x	100		gallons of water per vine per year
Divide by 325,821 gallons/af	=	18.5		af of water per yr used for vineyard irrigation

Future Usage:

Number of <u>planted</u> acres		13.1		acres
Multiply by number of vines/acre	x	1556		vines per acre
Multiply by gallons/vine/year	x	70		gallons of water per vine per year (long-term)
		90		gallons of water per vine per year (establish)
Divide by 325,821 gallons/af	=	4.4		af of water per yr used (vineyard long-term)
		5.6		af of water per yr used (vineyard establish)

STEP 4: Using the guidelines on the next page, actual water usage figures, and/or detailed water use projections, tabulate the existing and projected future water usage on the parcel(s) in acre-foot per year (af/yr) {1 af = 325,821 gallons}.

Existing Usage:

Residential	_____	af/yr
Farm Labor Dwelling	_____	af/yr
Winery	2.58	af/yr
Commercial	0.20	af/yr
Vineyard(long-term)	18.5	af/yr

Future Usage:

Residential	_____	af/yr
Farm Labor Dwelling	_____	af/yr
Winery	2.58	af/yr
Commercial	0.20	af/yr
Vineyard(long-term)	22.9	af/yr

	(establish)	_____	af/yr
Other Agriculture		_____	af/yr
Landscaping		0.6	af/yr
Other Usage		0.5	af/yr
TOTAL		22.4	af/yr

	(establish)	24.1	af/yr
Other Agriculture		_____	af/yr
Landscaping		0.6	af/yr
Other Usage		0.5	af/yr
TOTAL		26.8	af/yr

STEP 5: Attach all supporting information that may be significant to this analysis including but not limited to all water use calculations for the various uses listed

Parcel Location Factors

The allowable allotment of water is based on the location of your parcel. Valley floor areas include all locations on the floor of the Napa Valley and Carneros Basin except for groundwater deficient areas. Groundwater deficient areas are areas that have been determined by the Department of Public Works as having a history of problems with groundwater. All other areas are classified as Mountain Areas. Public Works can assist you in determining your classification.

Parcel Location Factors

Valley Floor	1.0 acre foot per acre per year
Mountain Areas	0.5 acre foot per acre per year
Groundwater Deficient Area (MST)	0.3 acre foot per acre per year

Guidelines For Estimating Water Usage:

Residential:

Single Family Residence	0.5 acre-foot per year
Farm Labor Dwelling	1.0 acre-foot per year (6 people)
Second Unit	0.4 acre-foot per year
Guest Cottage	0.1 acre-foot per year

Winery:

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

Commercial:

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

Agricultural:

Vineyards	
Irrigation only	0.2 to 0.5 acre-foot per acre per year
Heat Protection	0.25 acre foot per acre per year
Frost Protection	0.25 acre foot per acre per year
Irrigated Pasture	4.0 acre-foot per acre per year
Orchards	4.0 acre-foot per acre per year
Livestock (sheep or cows)	0.01 acre-foot per acre per year

Landscaping:

Landscaping	1.5 acre-foot per acre per year
-------------	---------------------------------