

**WATER AVAILABILITY ANALYSIS FOR
SCARLETT WINERY
1052 PONTI ROAD, NAPA COUNTY, CA
APN 030-280-010**

As required by Napa County Planning, Building and Environmental Services (PBES), this analysis evaluates the availability of groundwater for a potential winery and tasting room located on the Napa Valley floor at the subject parcel located at 1052 Ponti Road, Napa, CA 94558.

PROJECT DESCRIPTION

The 47.88± acre parcel is currently developed with a residence, guest house, irrigation/frost protection pond, miscellaneous structures associated with vineyard operations and 38.0± acres of vineyard.

It is our understanding that the project proposes to construct a tasting room and a full crush winery on the above referenced parcel with the intent of the facility having the capability of producing 30,000 gallons of wine per year. Along with the proposed wine production at the site, the project proposes a moderate staffing and marketing plan. The project proposes six (6) full-time employees, three (3) part-time employees and two (2) seasonal (harvest) employees. The project also proposes to offer private tour and tasting appointments for a maximum number of 15 guests per day and 64 guests per week. Furthermore, the Applicant plans to offer one (1) food and wine pairing lunch event per month for parties up to 10 persons and one (1) food and wine pairing dinner event per month for parties up to 10 persons. Additionally, the Applicant intends to host one (1) wine club release event per year for groups of up to 100 persons, with up to five (5) additional event staff, and one (1) wine club release event per year for groups of up to 200 persons, with up to ten (10) additional event staff. One (1) 125 person large event with five (5) additional event staff per year is also being proposed at the winery.

EXHIBITS

A USGS site map showing the site and approximate property line locations is included in the application package. Information regarding the location of existing wells and structures for the subject parcel is shown on the Use Permit Drawings and "Neighboring Well Location Map" prepared by Bartelt Engineering also included in the application package and attached, respectively.

GROUNDWATER OVERVIEW

According to the Napa County Watershed Information & Conservation Council (WICC), the subject parcel is primarily located in the St. Helena Groundwater Subarea of Napa County. The Napa County Groundwater Monitoring Program tested wells in this area in 2014 and 2015. The observed groundwater depth in these wells ranged from 44 feet to 240 feet below ground surface. Ground elevations range from 90 feet to 150 feet, mean sea level. The groundwater availability in this subarea is reported to be stable and as the well for this project is on the valley floor, a recharge analysis will not be conducted at this time.

WATER USE CRITERIA

The subject parcel is located in the Agricultural Preserve (AP) Zoning District in the Napa Valley sub-watershed area of the Mouth of Napa River watershed. Per the PBES Water Availability Analysis (WAA) Guidance Document dated May 12, 2015 the water use criteria for a parcel located on the Napa Valley Floor and non-groundwater deficient area without any well or spring interference must follow Tier 1 requirements.

Estimated Water Use

The total water demand for the existing and proposed uses for the project is calculated below based on the *Guidelines for Estimating Residential and Non-residential Water Use* from the WAA Guidance Document (2015):

TABLE 1A: EXISTING WATER DEMAND	
Description	Estimated Water Usage
Primary Residence	0.75 acre-feet/year
Secondary Residence (Guest House)	0.30 acre-feet/year
Vineyard (irrigation only on 38.0 ± acres of vineyard)	19.00 acre-feet/year
Vineyard (frost protection on 38.0 ± acres of vineyard)	9.50 acre-feet/year
Total Existing Water Demand =	29.55 acre-feet/year

TABLE 1B: PROPOSED WATER DEMAND	
Description	Estimated Water Usage
Primary Residence	0.75 acre-feet/year
Secondary Residence (Guest House)	0.30 acre-feet/year
Winery (30,000 gallons annually)	
Process Water (2.15 acre-feet per 100,000 gallons of wine)	0.65 acre-feet/year
Domestic and Landscaping (0.5 acre-feet per 100,000 gallons of wine)	0.15 acre-feet/year
Employees (3,477 shifts annually, 15 gallons per shift)	0.17 acre-feet/year
Tasting Room Visitation (3,328 visitors annually, 3 gallons per visitor)	0.04 acre-feet/year
Events and Marketing, with on-site catering (685 visitors & event staff annually, 15 gallons per visitor/event staff)	0.04 acre-feet/year
Vineyard (irrigation only on 36.4 ± acres of vineyard) ¹	18.20 acre-feet/year
Vineyard (frost protection on 36.4 ± acres of vineyard)	9.10 acre-feet/year
Total Proposed Water Demand =	29.40 acre-feet/year

¹ Approximately 2± acres of vineyard will be removed with 0.4± acres replanted resulting in 1.6± loss (net)

As shown in the above tables, the water demand is estimated to decrease as a result of the proposed project. The greatest water demand for the proposed project results from vineyard irrigation.

Allowable Water Allotment²

The following calculation assumes that 47.17± acres of the total 47.88± acres of the parcel lies in an area designated as “Napa Valley Floor” while the remaining 0.71± acres of the parcel lies in an area designated as “All Other Areas”. The 0.71± acres lies in an area physically separated from the rest of the parcel by Silverado Trail and is effectively disconnected from the proposed project. Therefore, not including this area in the parcel’s Allowable Water Allotment analysis means the calculation is conservative.

1.0 acre-feet/acre of water is allotted for parcels located on the Napa Valley Floor areas.

Allowable water allotment = 47.17± acres x 1.0 acre-feet/year = 47.17± acre-feet/year

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

SOURCE WATER INFORMATION

According to Napa County records there is one (1) well onsite serving the existing residence and guest house (Well #1) and one (1) well used for vineyard irrigation (Well #2). Well #2 is capable of producing a flow rate in excess of 400 gallons per minute³ (gpm). Well #1 will be transitioned to satisfy only the residential landscaping demand while Well #2 will be transitioned to satisfy all of the parcel’s remaining water demands, including residential, winery tasting room and production domestic water demands, fire protection demands, vineyard irrigation and frost protection demands and winery landscape demands.

Well Description

Well #2 complies with State regulations for a Water System and will be used to satisfy domestic and production post-development demand requirements. Under proposed conditions, ground water will be pumped from the existing well into onsite storage tanks and then supplied to the vineyard, residence, guest house, tasting room and production facility. The tanks will allow stored water to be distributed as appropriate.

Water System Classification

Although the proposed project serves less than five (5) connections, serves less than 25 yearlong residents⁴ and does not serve 25 people per day at least 60 days per year, a commercial kitchen is proposed. Therefore, under PBES guidelines Scarlett Winery may be required to operate and maintain a regulated transient non-community water system

² Calculation based on the Napa County WAA Policy for water usage.

³ State of California Well Completion Report No. e0132012 signed July 8, 2011 for work completed on July 8, 2011. Performed by Huckfeldt Well Drilling, Inc (License #439-746).

⁴ Yearlong resident is considered an individual served by the water system for 183 or more days annually and does not include seasonal employees.

(TNCWS) 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 two (2) seasonal employees are not considered yearlong residents.

SUMMARY AND CONCLUSION

The estimated water demand for parcel associated with the proposed Scarlett Winery Use Permit Application is projected to be less than the allowable water allotment in accordance with the Napa County Water Availability Policy.

ATTACHMENTS

Neighboring Well Location Map

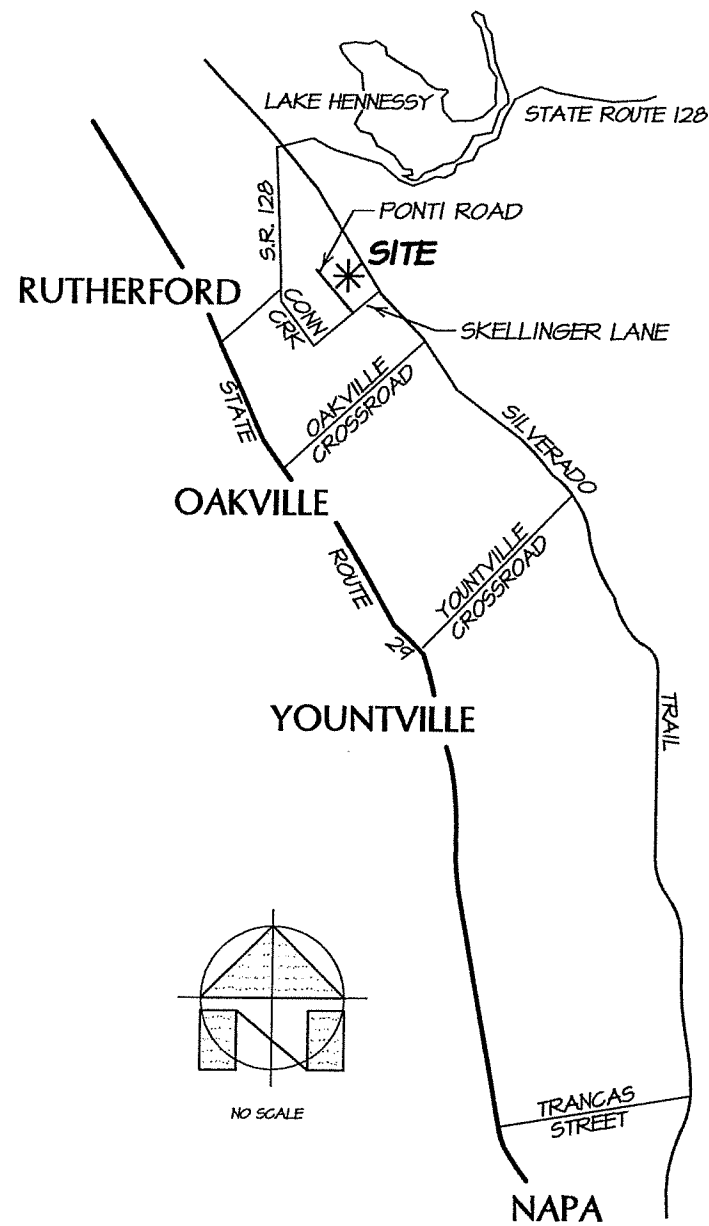
⁵ Yearlong resident is considered an individual served by the water system for 183 or more days annually.

REFERENCES

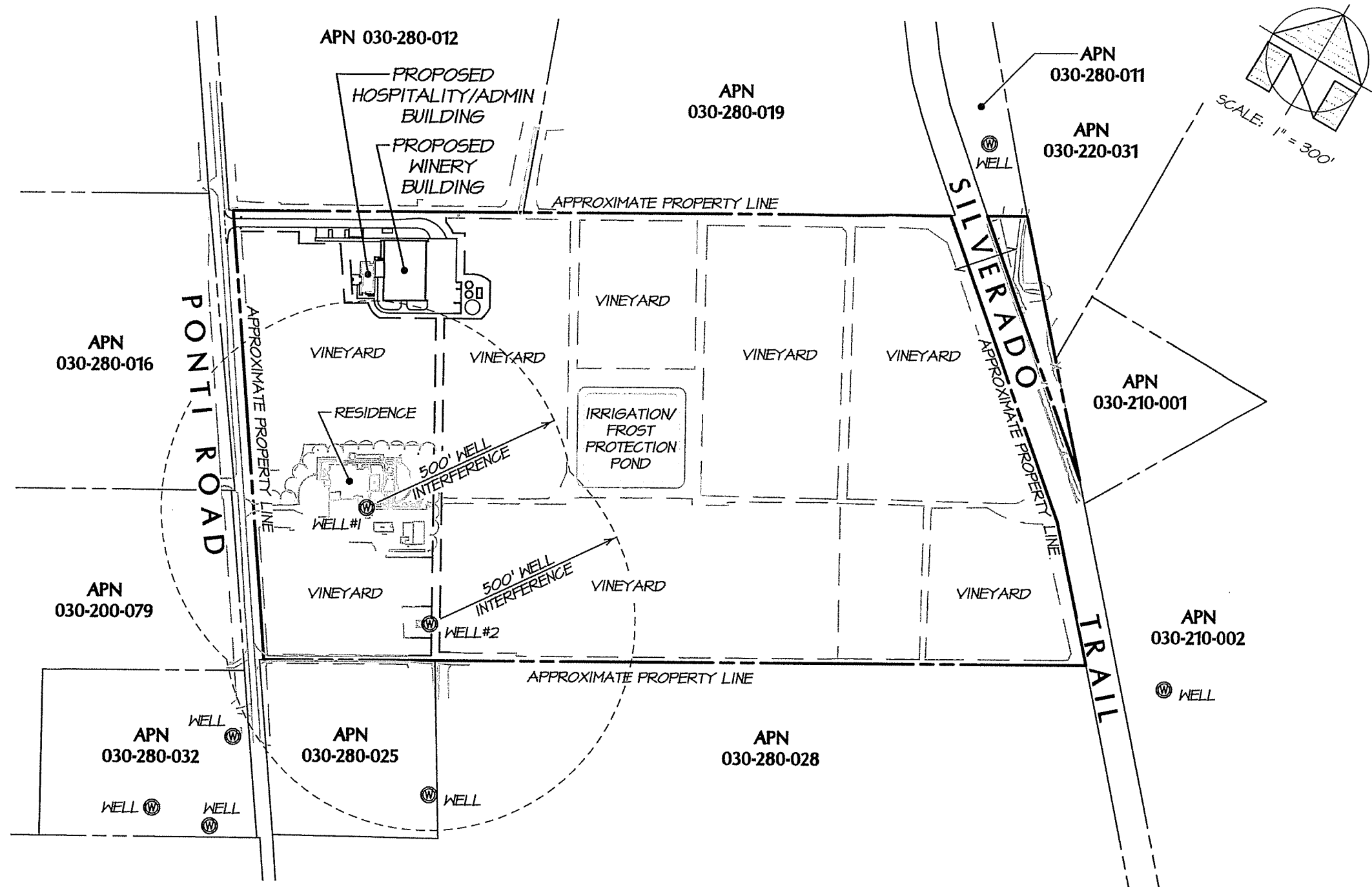
Napa County . "Water Availability (WAA) - Design, Construction and Guidance Document." May 12, 2015.

Napa County Watershed Information & Conservation Council (WICC). n.d.

1/30/2018 - 9:27 AM, Kelly J. Kelly, S. LAND PROJECTS 2015-2017 N5021015 USE PERMIT ACAD EXHIBITS 1502_WELLS.DWG



LOCATION MAP
NO SCALE



NOTES:
1. PROPERTY LINES WERE TAKEN FROM THE NAPA COUNTY GEOGRAPHIC INFORMATION SYSTEM MAPS.

NEIGHBORING WELL LOCATION MAP
SCALE: 1" = 300'

BARTELT
ENGINEERING
CIVIL ENGINEERING · LAND PLANNING
1303 Jefferson Street, 200 B, Napa, CA 94559
www.barteltengineering.com
Telephone: 707-258-1301

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