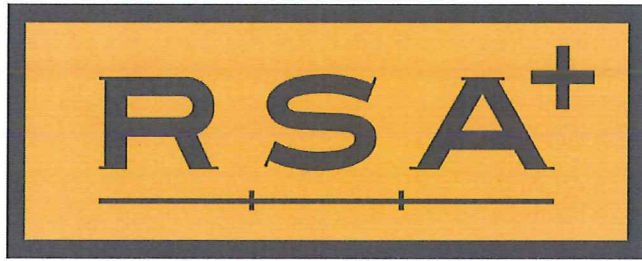


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Water Availability Analysis

O'Brien Winery P18-00175-MOD & Conservation Regulations
Exception P18-00305
Planning Commission Hearing March 20, 2019



WATER AVAILABILITY ANALYSIS

O'BRIEN WINERY
1200 ORCHARD AVE
NAPA, CALIFORNIA

APN 035-041-015

PROPERTY OWNER:

Bart O'Brien
1200 Orchard Ave
Napa, CA 94558

Project# 4116036.0

May 7, 2018
Revised: July 06, 2018





I. Executive Summary

O'Brien Winery has an approved Use Permit allowing wine production up to 20,000 gallons per year and is requesting recognition and authorization of existing visitation, employees and marketing events. Below is a summary of the water use. Detailed calculations can be found on the next page. A Groundwater recharge rate of 1.0 af/yr/acre for valley floor was adopted for the 26.93 acre parcel to give a total groundwater recharge of 26.93 af/yr for the project parcel.

Usage Type	Usage [af/yr]
Residential Domestic	0.54
Vineyard Irrigation	11.14
Winery Process Water	0.31
Landscaping	0.10
Domestic Water – Staff, Visitors, and Events	0.19
Totals (Acre-ft per Year)	12.28
Estimated Ground Water Recharge (Acre-ft per Year)	26.93

II. Conclusion

The water use for the O'Brien Winery project is 12.28 af/yr which is less than the estimated groundwater recharge rate of 26.93 af/yr. This report was prepared in accordance with the Napa County Water Availability Analysis Policy Report updated December 18, 2014.



III. Water Use Calculation

Residential Water Demand

Household – (120 gal/bedroom/day x 4 bedrooms) = 0.54 af/yr

Vineyard Irrigation Water Demand

Vineyard – Irrigation only – (0.5 af/ac-yr x 22.47 acres vineyard) = 11.24 af/yr

Vineyard – To Be Removed – (-0.5 af/ac-yr x 0.20 acres vineyard) = -0.10 af/yr

Winery Process Water Demand

Process Water – (5 gal water / 1 gallon wine x 20,000 gal wine/year) = 0.31 af/yr

Winery Landscape Water Demand

Landscape – (0.5 af / 100,000 gallon wine x 20,000 gal wine/year) = 0.10 af/yr

Winery Domestic Water Demand

FT Employees – (15 gal/person x 260 days/yr x 4 employees/day) = 0.05 af/yr

PT Employees – (15 gal/person x 156 days/yr x 3 employees/day) = 0.02 af/yr

Total Visitors – (3 gal/person x 52 weeks/yr x 210 visitors/week) = 0.10 af/yr

Marketing Events – (30 visitors @ 10 gal/guest x 12 days/yr) = 0.01 af/yr

Marketing Events – (2 workers @ 15 gal/worker x 12 days/yr) = 0.00 af/yr

Total Domestic Demand = 0.19 af/yr

Total Water Demand 12.28 af/yr